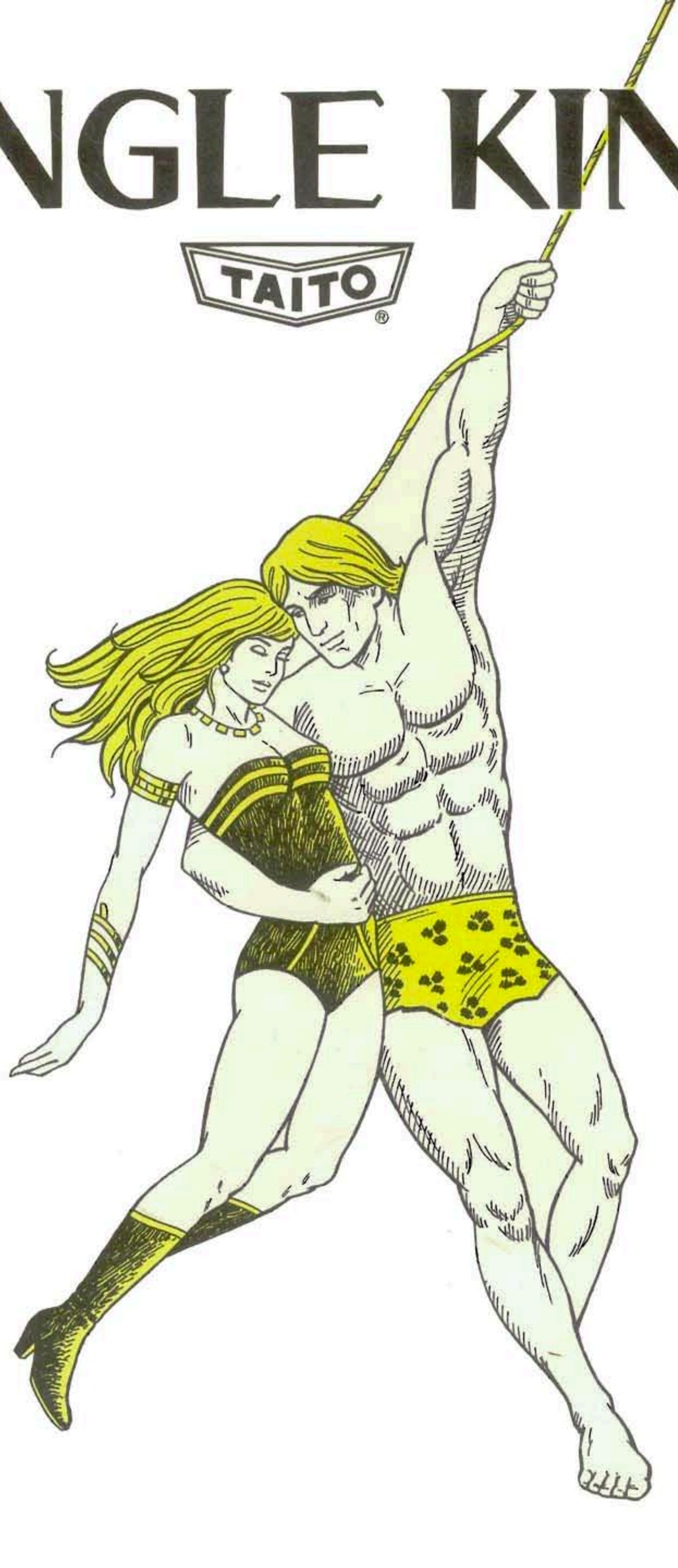
JUNGLE KING T.M.

TAITO ®



 72-00024-001

"JUNGLE KING"™ UPRIGHT

TABLE OF CONTENTS

"JUNGLE KING"™ UPRIGHT

1. GAME SET-UP
A. INTRODUCTION

"JUNGLE KING"™ TAITO AMERICA CORPORATION'S "JUNGLE KING" game takes you deep into the jungle as 'JUNGLE KING' leaps from vine to vine, swims through a crocodile infested river, dodges falling boulders to save a beautiful girl who has been captured by barbarians.

As the vines swing from left to right, time the swinging movements and push the Button to jump from vine to vine. Be careful of the monkeys that try to hamper your progress.

Swing from the last vine and dive into the crocodile infested river. Push the Button to destroy the crocodiles with your knife and earn bonus points. Watch your air supply or your Jungle King will drown when the meter reaches "0"

Make it through the river safely - now run up the hill and jump over or duck under the falling boulders and find the beautiful Jungle Princess who is guarded by hostile barbarians.

Use the Joystick Control and Button to jump over the barbarians and save the beautiful girl from her dangerous captors.

An extra Jungle King will be awarded when scoring 10,000 (adjustable) points. The game ends when all Jungle King's are lost or the game timer reaches "0"

B. GAME INSPECTION

TAITO AMERICA'S CORPORATION'S "JUNGLE KING"™ upright game is ready to play when received. However, careful inspection is necessary to insure your game is in perfect condition. Please verify the following before turning the game on.

* Examine external parts for chips, dents, or broken parts.
* Open the service door and examine the following:
  * Plug-in connectors to make sure they are firmly seated.
  * Speaker
  * Player Controls
  * Printed Circuit Boards making sure there is no damage to the components.
  * Check for loose foreign objects, especially metal objects which may cause electrical problems.
  * Fuses, making sure they are firmly in the holders.
  * Coin Mechanisms

The Video Monitor is properly adjusted before shipping. If there are any adjustments necessary refer to our Video Monitor Manual (72-00025-001).

If problems occur or technical assistance is required, contact our Customer Service Department HOT LINE Toll Free 800-323-0666 (except Illinois). Illinois phone 312 981-1000 X215.

POWER REQUIREMENTS

TAITO AMERICA CORPORATION'S "JUNGLE KING"™ upright game is shipped ready for operation at 120VAC, 60Hz with a power consumption of approximately 250 Watts.

CAUTION

For safe operation it is recommended the cabinet be grounded. This game is equipped with a three conductor power cable. The third conductor is the ground conductor and when the cable is plugged into an appropriate receptable, the game is grounded. The offset pin on the power cable's three-prong connector is the ground connection.

LOCATION SPACE REQUIREMENTS

Depth - 35" (87.5cm)
Width - 24" (61cm)
Height - 68" (171cm)
Weight - 300 lbs.
(Packaged Weight)

C. GAME INSTALLATION

The following precautions should be followed when installing the game.

* Avoid rough handling of the game, the picture tube is fragile.
* Install the game on a level surface.
* Avoid installing the game where it may receive excessive sunlight or heat, to prevent the game from rising internal temperature.
* Do not install in a damp or dusty location.
* For a short time after connecting the power to the game, the picture may be temporarily distorted.

D. DIP SWITCH AND VOLUME CONTROL SETTINGS

DIP SWITCHES

TAITO AMERICA CORPORATION'S "JUNGLE KING"™ upright game provides the following option switches. See Figure 1. These option switches can be found on the CPU Board (99KNN00004).

DIP SWITCH A

Setting	Position	1	2	3	4	5	6	7	8
Last	No Bonus	OFF	OFF						
Frame	Timer Remaining Fig x 1	ON	OFF						
Clearing	Timer Remaining Fig x 2	OFF	ON						
Bonus	Timer Remaining Fig x 3	ON	ON						
Number of	3				OFF	OFF			
Jungle Kings	4				ON	OFF			
	5				OFF	ON			
	6				ON	ON			
Test Mode	Normal						OFF		
	Test						ON		
Screen	2-P							OFF	
Inversion	1-P							ON	
Game	TT								OFF
Style	Upright								ON

DIP SWITCH B

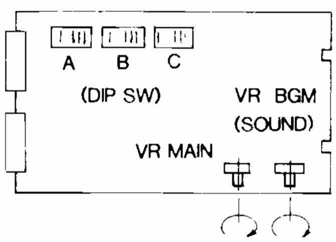
		1 Way				2 Ways			
Setting	**Position**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1 Coin - 1 Play		ON	ON	ON	ON	ON	ON	ON	ON
1 Coin - 2 Plays		OFF	ON	ON	ON	OFF	ON	ON	ON
1 Coin - 3 Plays		ON	OFF	ON	ON	ON	OFF	ON	ON
2 Coins - 1 Play		ON	ON	ON	OFF	ON	ON	ON	OFF
3 Coins - 1 Play		OFF	ON	ON	OFF	OFF	ON	ON	OFF
4 Coins - 1 Play		ON	OFF	ON	OFF	ON	OFF	ON	OFF

DIP SWITCH C

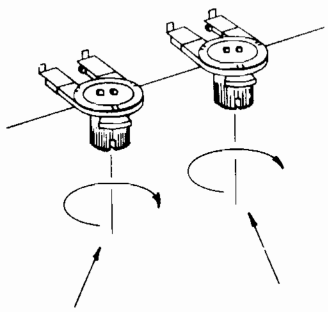
Setting	Position	1	2	6	7	8
Bonus Points	(Not Added)	OFF	OFF			
For Additional	10,000 Pts.	ON	OFF			
Jungle King	20,000 Pts.	OFF	ON			
	30,000 Pts.	ON	ON			
Year Display	Display			OFF		
"1982"	Not Display			ON		
No Hit	Normal				OFF	
Of Player	No Hit				ON	
Coinage	2 Ways					OFF
	1 Way					ON

Note: The Positions 3, 4, and 5 are not used in this game.

OPTION SWITCHES
FIGURE 1



VOLUME CONTROL LOCATIONS
FIGURE 2



VOLUME CONTROL SETTING

The Volume increases by turning the potentiometer as indicated in Figure 2.

E. TEST MODE

The following will be seen on the CRT screen while testing.

Normal	
Blue Background White Letters	'RAM TEST NO RAM FAILURE'
No Letters Blue Background	IC14, 56 on bottom of CPU board
Letters On Background will be strange colors	IC104 thru 109 Center of Video Board

2. MAINTENANCE

All games require a certain amount of maintenance to keep them in good condition. A periodic check of mechanical controls would be beneficial to guarantee your game will be profitable.

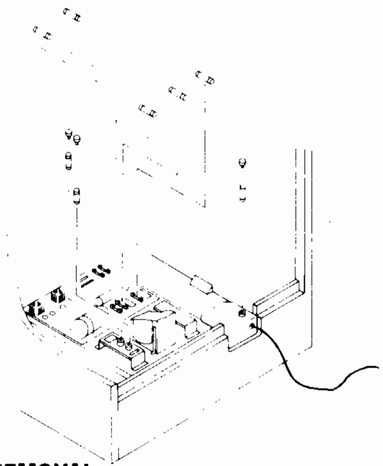
A. CLEANING

The exterior of the game, all metal parts and all plastic parts can be cleaned with an non-abrasive cleanser. Caution should be used when cleaning the plastic, a dry cloth can cause scratches and result in a foggy appearance.

B. FUSE REPLACEMENT

This game contains 8 fuses. Seven of these fuses can be found on the Power Supply Assembly, five (5) are on the PCB and two (2) are on the Power Supply Bracket. One (1) is located at the bracket where the AC line cord comes into the cabinet. See Figure (4) for location of these fuses.

FUSE REPLACEMENT
FIGURE 3



C. VIDEO MONITOR REMOVAL

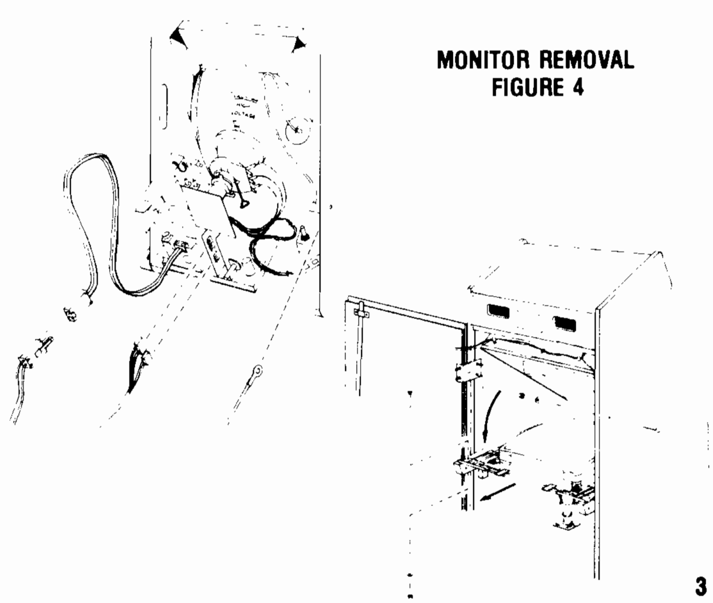
If you need to remove the Video Monitor, follow the Instructions listed below.

> **CAUTION**
>
> It is recommended the game be left disconnected for at least one hour before removing the Video Monitor. This will probably discharge the Video Tube but EXTREME CAUTION is still necessary.

* Disconnect power from the line voltage.
* Disconnect the Monitor cable connector.
* Remove the wire cable clamp.
* Take out the two side bolts, one on each side of the cabinet in order to lower the monitor.
* Remove the four mounting bolts and disconnect the green ground wire.
* Slide the Monitor out by pulling the Monitor toward you.

> **CAUTION**
>
> Use extreme caution and do not touch electrical parts of the Monitor Yoke area with your hands or with any metal object in your hands! High voltages may exist in any Monitor, even with power disconnected.

MONITOR REMOVAL
FIGURE 4



D. VIDEO MONITOR ADJUSTMENTS

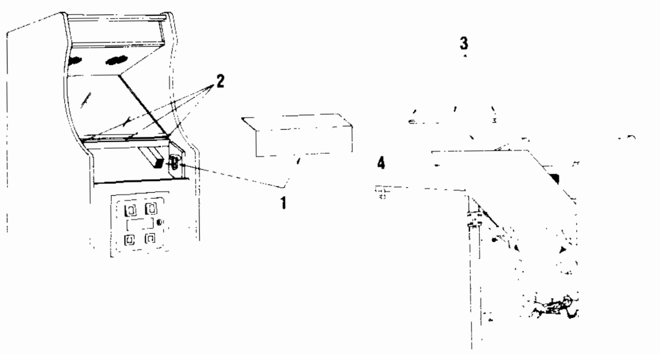
TAITO AMERICA CORPORATION presently uses either a Wells-Gardner or an Electrohome 19" color monitor in the "JUNGLE KING"™ game. Refer to Monitor Manual (72-00025-001) for your specific Video Monitor. Be sure to heed all the WARNINGS AND CAUTION INSTRUCTIONS provided before repairing or replacing your Video Monitor.

E. COVER GLASS REMOVAL

To remove the Cover Glass follow the Instructions listed below:

1. Remove the control Panel.
2. Loosen three (3) screws on the Cover Glass, front bracket.
3. Open Service Door and remove the (Rear) Cover Glass Bracket.
4. Slide glass up and out through the Service Door.

COVER GLASS REMOVAL
FIGURE 5

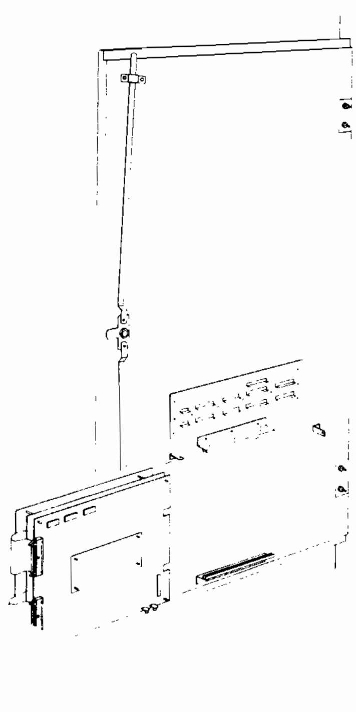


F. PRINTED CIRCUIT BOARD REPLACEMENT

You may wish to remove the "JUNGLE KING"™ Printed Circuit Boards for servicing. Refer to Figure 6.
The "JUNGLE KING" Printed Circuit Boards are located on the inside of the Rear Service Door for easy access.
To remove the boards the following steps should be followed:

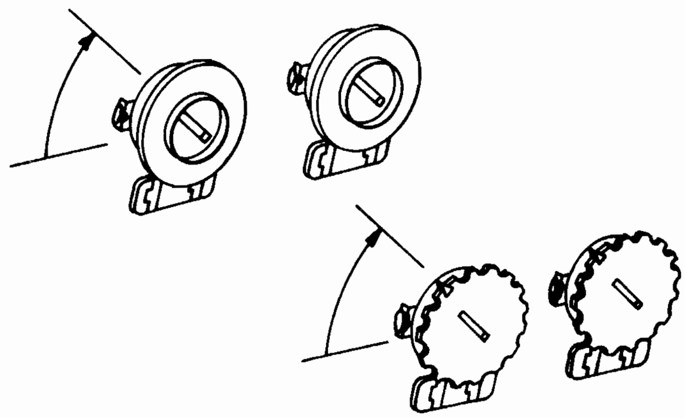
1. Open the rear service door, the power will automatically be removed by the Interlock Switch located on the inside of the door frame.
2. Disconnect the connector G, H, and T from the boards.
3. Loosen and turn the Stop Bracket and pull the boards toward you out of the board guides.

PRINTED CIRCUIT BOARD REPLACEMENT
FIGURE 6



G. POWER SUPPLY ADJUSTMENTS

VOLTAGE Adjust voltages on +5V and +12V for +5.00V to +5.05V and +12.00V to +12.05V.
CURRENT LIMIT Adjust control (5I and 12I) counterclockwise until voltage just changes, then turn control clockwise until voltage goes back to original value with pointer, mark position of arrow on potentiometer then turn control until beginning of 1st notch is aligned with the pointer. On the controls with the Blue Disk turn approximately 30°.



CURRENT LIMIT ADJUSTMENT
FIGURE 7

NOTE: If Voltage adjustment will not bring voltage up, set current limit adjustment to ½ value.

CMOS RAM

If when powering the game up, it will not coin up because the battery is low. The following Procedure should be followed. Open the Back Door of the game, pull W1 out on the Video Board (Blue jumper). Wait 2 minutes, power back on and insert W1 back in. Open the Coin Door and pull out bottom Interlock Switch. If the Language Select frame does not come on the CRT, power down, remove W1 again. Short pins 18 and 9 on U85, power back on and insert W1 back in. Leave the game on for 12 hours. If this Procedure does not work when you turn the game back on the battery may need to be replaced.

3. POWER SUPPLY

The Power Supply produces all the necessary game voltage requirements.

A. AC INPUT

The AC Input Voltage is applied to the main Power Supply via the AC Line Cords, Line Filter, Line Fuse, Power Switch and Interlock Switch. Different Line Cords are used for 120V and for 240V. The Line Fuse is located on the Line Cord Assembly near the Strain Relief. A Voltage Programming Block is located on the primary side of the Transformer to compensate for high/low voltage conditions. The following line voltages may be inserting the appropriate Programming Plug.

Line Voltage		Line Fuse
100 VAC ± 10%	50/60Hz	3 AMP
120 VAC ± 10%	50/60Hz	3 AMP
200 VAC ± 10%	50/60Hz	1.5 AMP
220 VAC ± 10%	50/60Hz	1.5 AMP
240 VAC ± 10%	50/60Hz	1.5 AMP

TABLE 3-1 LINE VOLTAGE

CAUTION

For continous protection against fire hazard, replace only with a fuse of the same type having the same electrical rating.

There are five secondary sources. Three go to the Regulator PCB providing +5VDC, +12VDC, −12VDC, and −5VDC. The other two are fused 6.3VAC used for the incandescent lighting and fused 120VAC used for the monitor, and in certain models for a fluorescent lamp and fan. These secondary fuses are located on the bracket adjacent to the Power Transformer.

Circuit	Secondary Fuse
120VAC	2.0AMP SLO-BLO
6.3VAC	2.5AMP

TABLE 3-2 SECONDARY FUSES

B. −5VDC AND −12VDC REGULATORS

The AC Input for the negative voltages comes into the Regulator PCB on J1-5 and J1-6 from the transformer. Fuse F3 protects against short circuits. The AC voltage is then full wave rectified by BR3 and filtered by C16. The raw DC is then applied to Reg 1, a three terminal −12V Regulator. The output of this Regualtor is the −12VDC output for the system and is also the input voltage for Reg 2, a −5V Regulator. The output of this Regulator is the −5VDC for the system.

Capacitors C17, C18, C19 are to improve the transient response and stability of the minus voltage regulator. Diodes D8 and D9 provide protection against C18 and C19 being shorted through the Regulator.

Resistors R34 and R35 provide current limiting for LED'S 3 and 4 which will light when there is voltage present at the regulation outputs.

C. +5VDC REGULATOR

The AC Input for the +5VDC Regulator circuit comes in on J1-4 and J1-2, via F1 into BR1. BR1 full wave rectifies the AC Input. This raw DC is applied to the collectors of (2) series pass transistors, mounted on the Heat Sink Assembly. The regulation is done by U3, which is a voltage regulator whose output controls the gain of Q5, which in turn controls the gain of the series pass transistors. The emitter of the series pass transistor return to the Regulators PCB and through R11 and R12, which serve to force current sharing between the series pass devices. The voltage at the output of R11 and R12 are the +5VDC for the system. R11 and R12 are voltage set and current foldback adjustments respectively. These are factory adjusted to 5V ±.25V. at 7AMPS.

Q8, D3 and R20 comprise a SCR-Type Crowbar Circuit which will trigger when the DC output voltages rise above 5.8V. Once the SCR fires, the Power Supply has to be turned off to reset the device. R19 is a current limiter for the voltage indicator LED 1. R16 is used to set the output voltage of the Regulator.

C8, D2, R13 and Q4 delay the start-up of the 5V Regulator to allow the −5VDC Regulator to stabilize first.

D. +12VDC REGULATOR

This circuit is essentially the same as the 5V Regulator described above. The AC current comes in on J1-3 and J1-4, via fuse F2 into BR2. The AC is rectified by BR2 and filtered by C9. The raw DC is fed to a single series pass transistor on the Heat Sink Assembly and also powers the +12V and +5V Regulator. R28 and R25 are voltage set and current foldback and factory adjusted to 12 Volts ±.25V at 4 AMPS. D7, Q9, and R31 are SCR Crowbar Circuits which trigger at 13VDC output which causes supply to go into current foldback. There is an RC delay as in the 5V circuit to delay the +12V rise time.

E. RESET CIRCUIT

The reset circuit will output a 2sec active low MRST pulse at J3-14 J4-14 when the power is first turned ON and whenever power fails for more than 35ms.

The reset circuitry is comprised of a Dual Timer (556) and a fullwave type optical coupler across an AC secondary. The output of U1 is the input to one half of the 556 which is configured as a missing pulse detector. C1 and R3 determine the time before the output goes active. This is set for about 35ms. When two or more cycles are missing, the output of the first timer triggers the second timer which drives the MRST low for about 2 seconds. The timer constant for the second timer is set by R4 and C6.

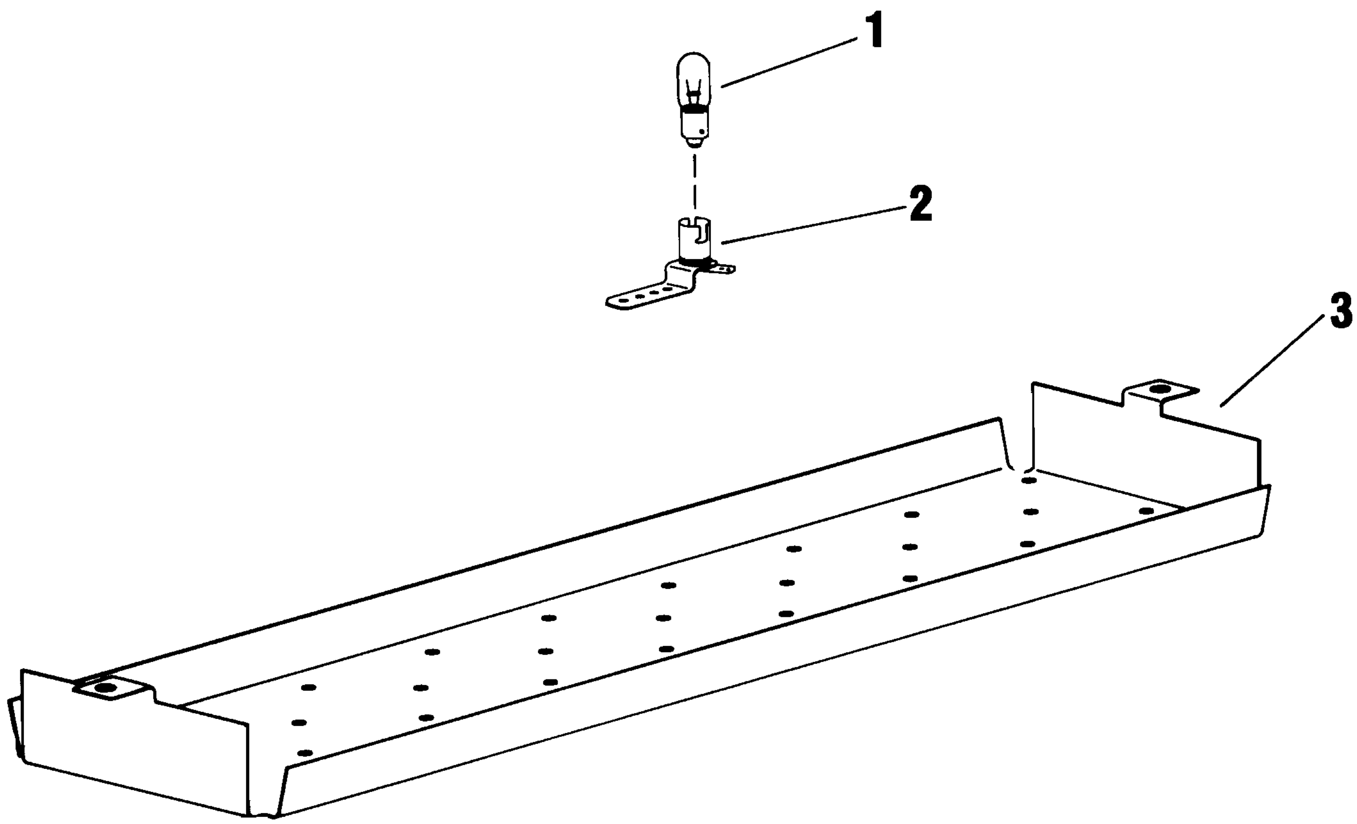
Power on reset is generated by C4, and R39 and D12 on the trigger input of the second timer. Q3 inverts the signal out of the 556 so it is active low. R7 insures MRST is low while the power is rising.

NOTES

INCANDESCENT PANEL

FIGURE 8

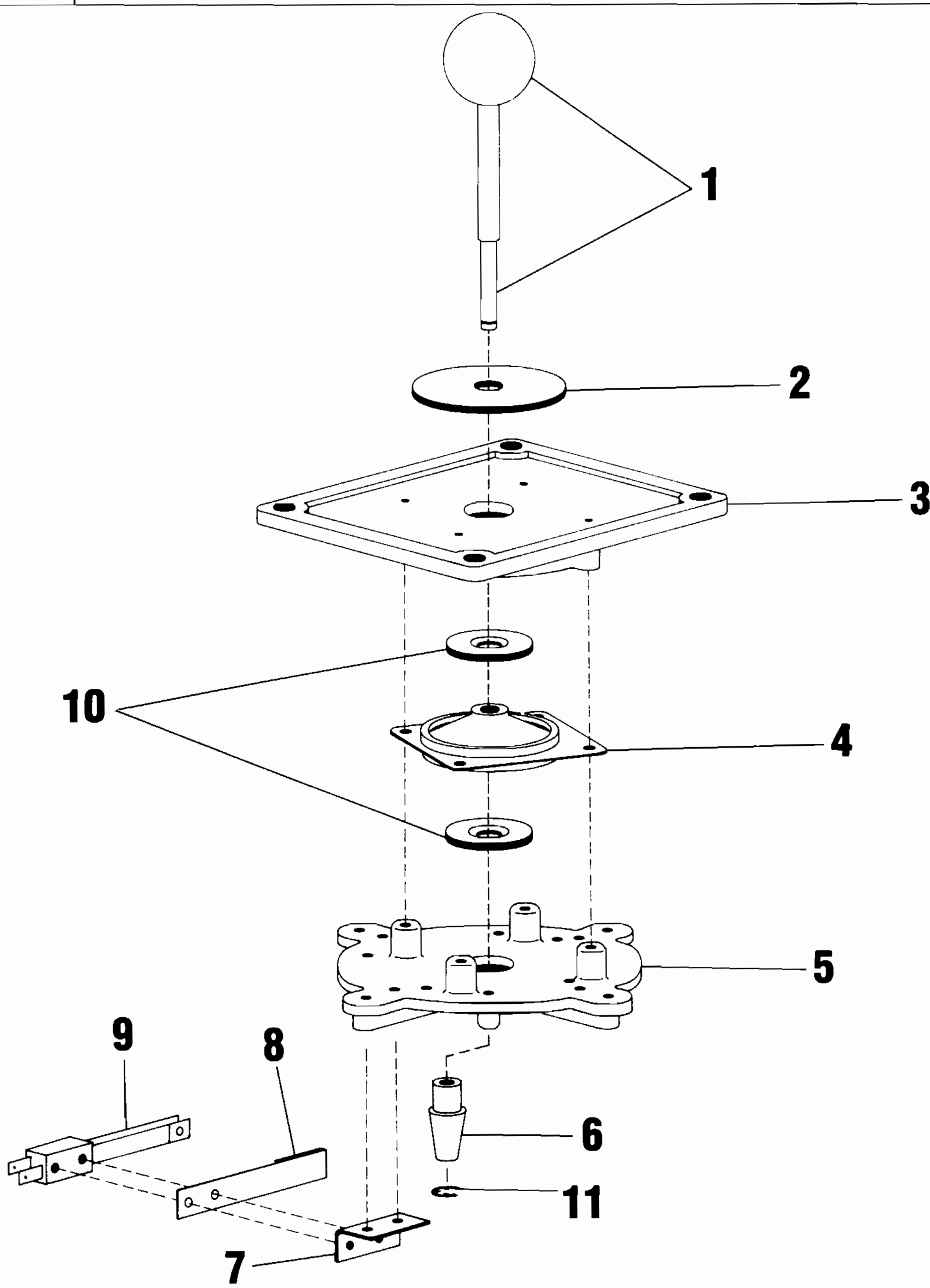
ITEM	TAITO PART NO.	DESCRIPTION
1	27-00006-001	LAMP #47
2	26B00009-001	BAYONET BASE SOCKET
3	61D00112-001	MARQUEE LIGHTING PLATE



8-WAY JOYSTICK

FIGURE 9

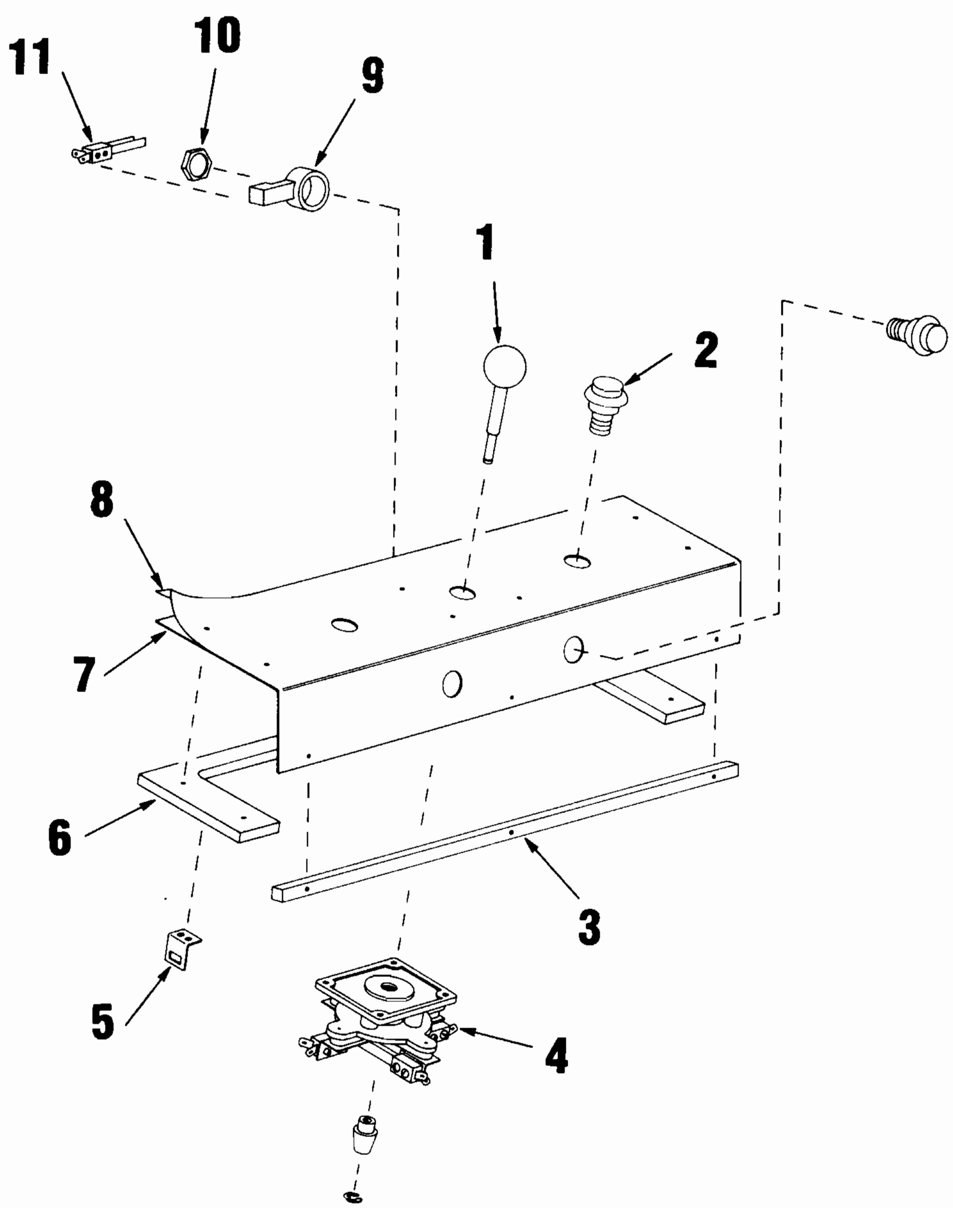
ITEM	TAITO PART NO.	DESCRIPTION
1	63B00031-001	BALL & SHAFT
2	63A00033-001	MASK
3	63C00027-001	MOUNTING PLATE
4	62A00002-001	SHOCK MOUNT PAD
5	63A00028-001	SWITCH PLATE
6	62A00030-001	ACTUATOR
7	61A00078-001	"L" BRACKET
8	63A00026-001	SWITCH SPACER
9	29B00016-002	LEAF SWITCH
10	63A00029-001	SPACER
11	59B00020-017	"E" RING



CONTROL PANEL

FIGURE 10

ITEM	TAITO PART NO.	DESCRIPTION
1	63B00031-001	BALL & SHAFT
2	63B00024-001	PUSH BUTTON, WHITE
3	42B00108-001	CLEAT, WOOD
4	63D00032-006	8-WAY CONTROL
5	61A00015-001	STRIKE HOOK
6	42D00017-001	CONTROL PANEL, WOOD
7	61D00251-001	CONTROL PANEL, METAL
8	63D00096-001	LEXAN DECAL
9	63-00025-001	SWITCH SUPPORT
10	54A07001-008	NUT, STAMPED ⅝–11
11	29B00016-001	LEAF SWITCH



DOOR ASSEMBLY

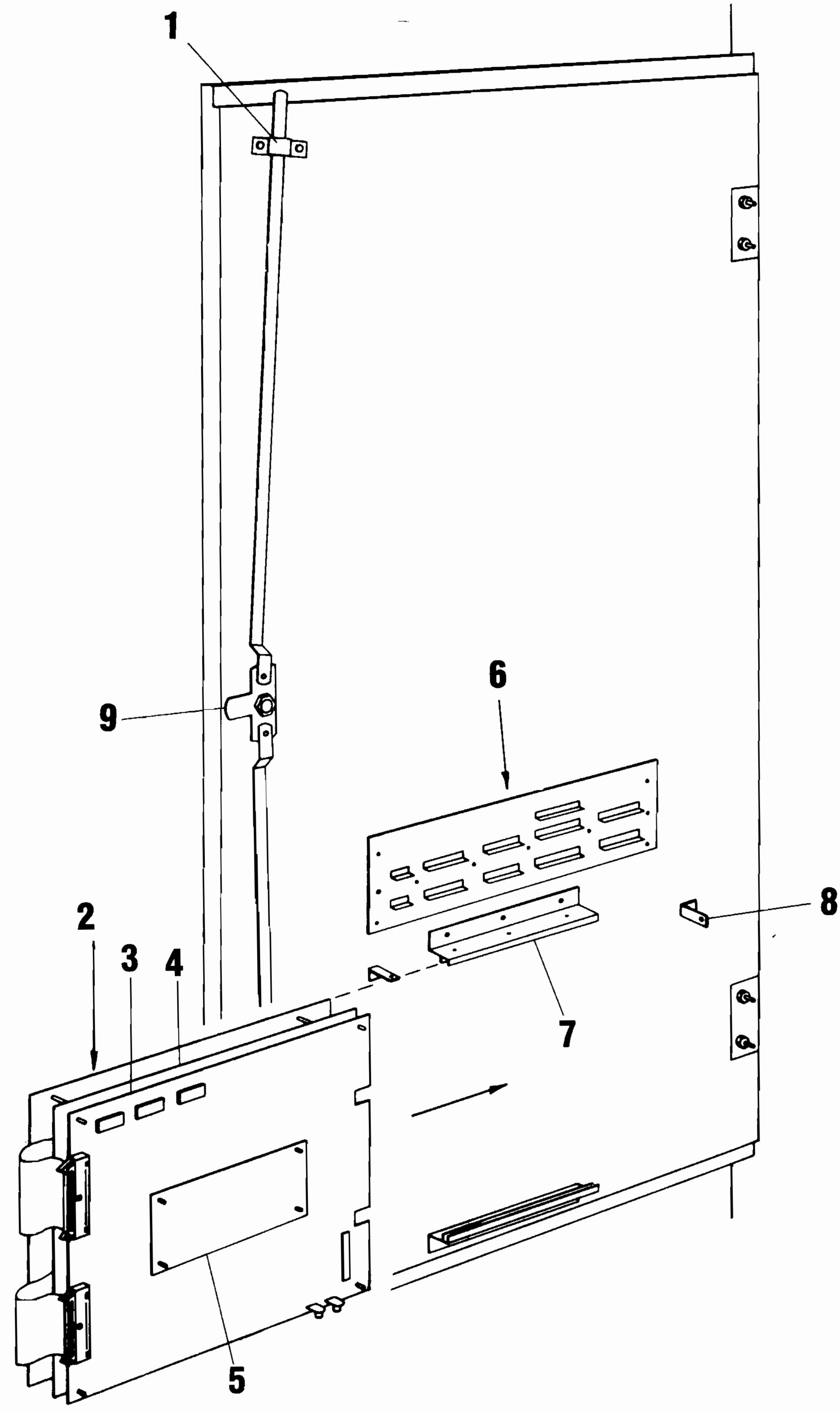
FIGURE 11

ITEM	TAITO PART NO.	DESCRIPTION
1	61A00111-001	BRACKET, LOCK ROD
2	99KNN00003	GAME P.C.B.
3	99KNN00004	CPU P.C.B.
4	99WW00002	VIDEO P.C.B.
5	99KNN00005	ROM P.C.B.
6	08-00017-001	FILTER P.C.B.
7	07-00131-001	P.C. GUIDE ASSEMBLY
8	61A00014-001	"L" BRACKET
9	61-00142-001	LOCK ROD ASSEMBLY
*10	08-00053-001	BOARD SET CONTAINS ITEMS 2,3,4,5

*Item not shown on drawing

DOOR ASSEMBLY

FIGURE 11



COIN DOOR

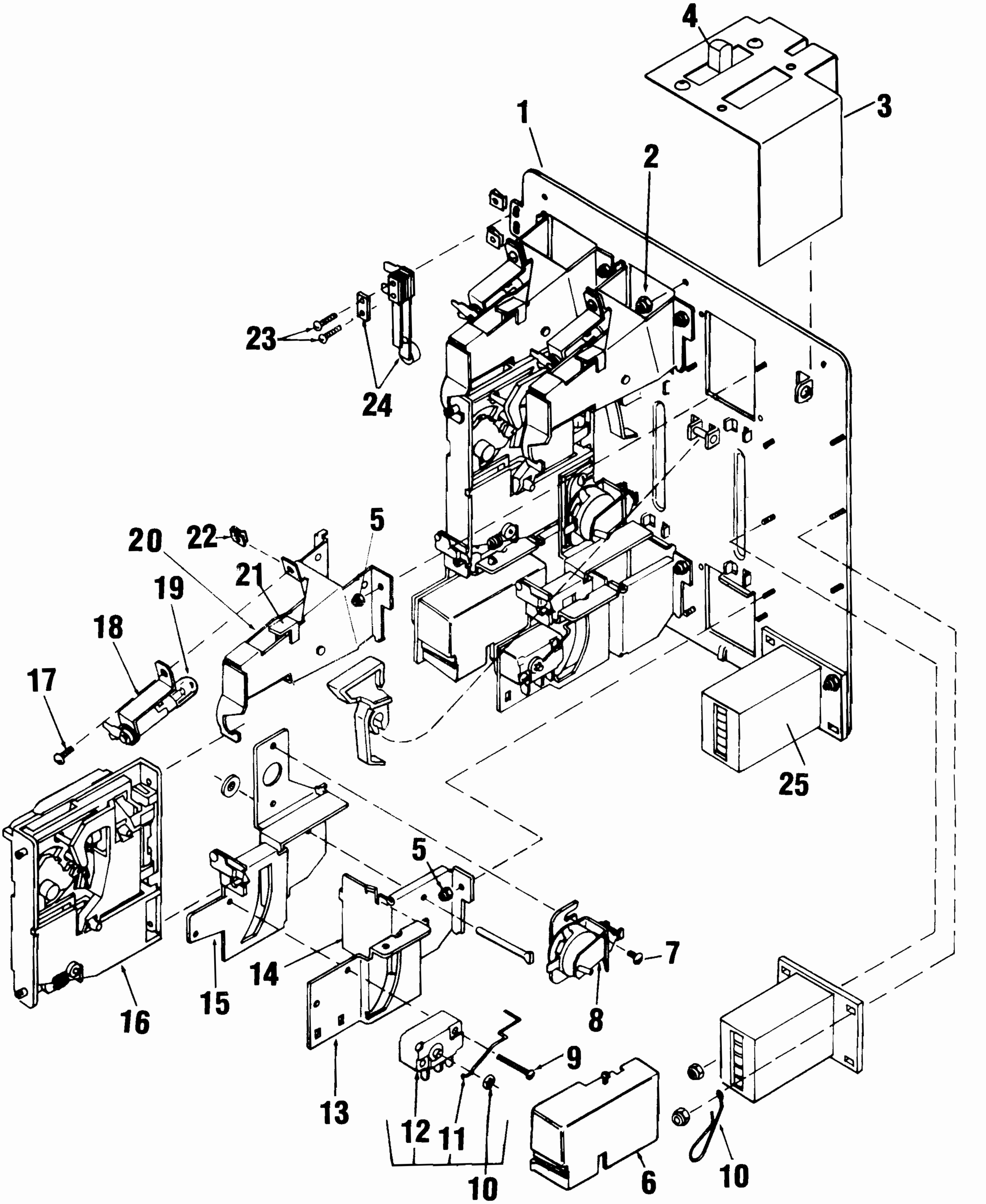
FIGURE 12

ITEM	TAITO PART NO.	DESCRIPTION
1	07-00027-001	INNER PANEL WITH LEVERS SUB ASSEMBLY
2	54-03013-001	NUT #8-32
*	09-00017-001	CUSTOM HARNESS ASSEMBLY (SHL)
*	09-00017-002	CUSTOM HARNESS ASSEMBLY (DUAL)
3	61b00113-001	SERVICE SWITCH BRACKET
4	29-00022-001	SERVICE SWITCH
5	54-03011-001	NUT #4-40
6	63-00014-001	SWITCH COVER
7	51-02052-001	SCREW #6-32 x 3/16 SS PH
8	23-00001-001	C.R.E.M. COIL ASSEMBLY
9	51-02052-001	SCREW #6-32 X 3/16 SS PH
10	59-00019-001	RETAINER
11	28-00029-001	SILVER SWITCH WIRE FOR U.S. .25
12	29-00007-001	SWITCH
13	61-00044-001	COIN CHUTE
14	61-00045-001	COIN RETURN BOX
15	61-00025-001	SWITCH & C.R.E.M. COIL BRACKET
16	59-00018-001	.25 ACCEPTOR
17	51-02051-006	SCREW 4-40 X 3/8 SS PH
18	27-00003-001	MINATURE BAYONET BASE LAMP
19	27-00008-001	#815 LAMP
20	61-0048-001	COIN INLET CHUTE
21	61-00047-001	RIGHT HALF OF COIN INLET CHUTE
22	54-00001-001	"U" TYPE FASTENER
23	51-02051-006	SCREW 4-40 X 1/2 SS PH
24	29-00006-001	SLAM SWITCH ASSEMBLY
25	998325	COIN METER

*Item not shown on drawing.

COIN DOOR

FIGURE 12



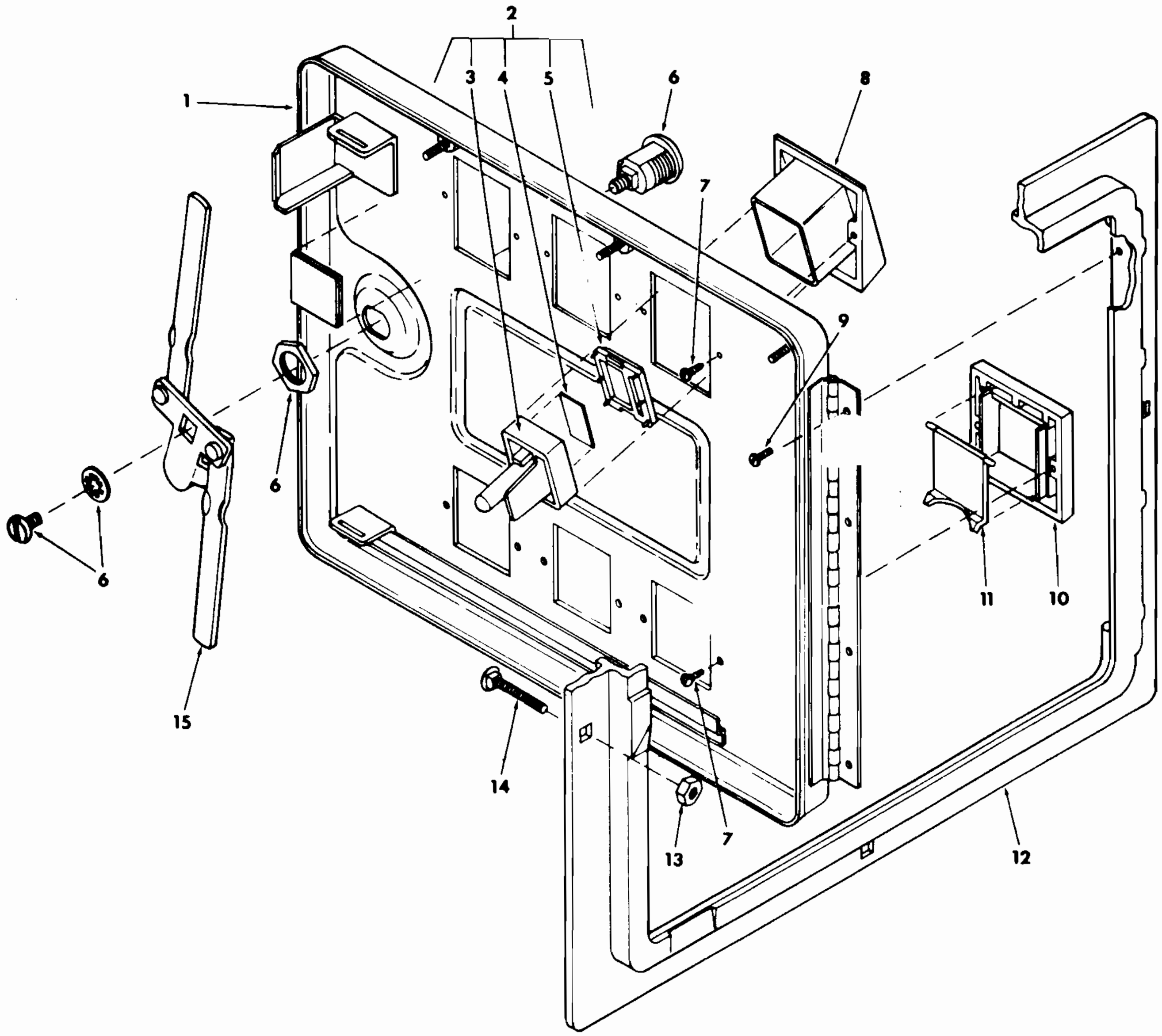
COIN DOOR

FIGURE 13

ITEM	TAITO PART NO.	DESCRIPTION
1	61-00042-001	COIN DOOR ONLY (2 COIN)
2	07-00023-001	COIN RETURN BUTTON ASSEMBLY FOR U.S. .25 COIN
3	63-00015-001	COIN RETURN BUTTON
4	79-50004-001	U.S. .25 PRICE DECAL
5	63-00016-001	COIN RETURN BUTTON COVER FOR U.S. .25 COIN
6	07-00025-001	LOCK ASSEMBLY
6A	07-00025-001	LOCK ASSEMBLY
7	51-01051-003	SCREW #4 X 5/16 SL PH TYPE B
7A	51-01051-003	SCREW #4 X 5/16 SL PH TYPE B
8	63-00011-001	COIN BUTTON HOUSING
9	51-02051-002	SCREW #4-40 X 1/4 SL PH
10	63-00012-001	COIN RETURN BEZEL
11	63-00013-001	COIN RETURN COVER
12	61-00040-001	COIN RETURN FRAME 11 5/8 X 13 3/8 MOUNTS IN A 10 3/8 X 12 3/16 OPENING
13	54-01005-001	HEX NUT 1/4 - 20
14	51A03003-113	CARRIAGE BOLT
15	07-00026-001	LOCK ARM ASSEMBLY

COIN DOOR

FIGURE 13



CABINET ASSEMBLY FRONT VIEW

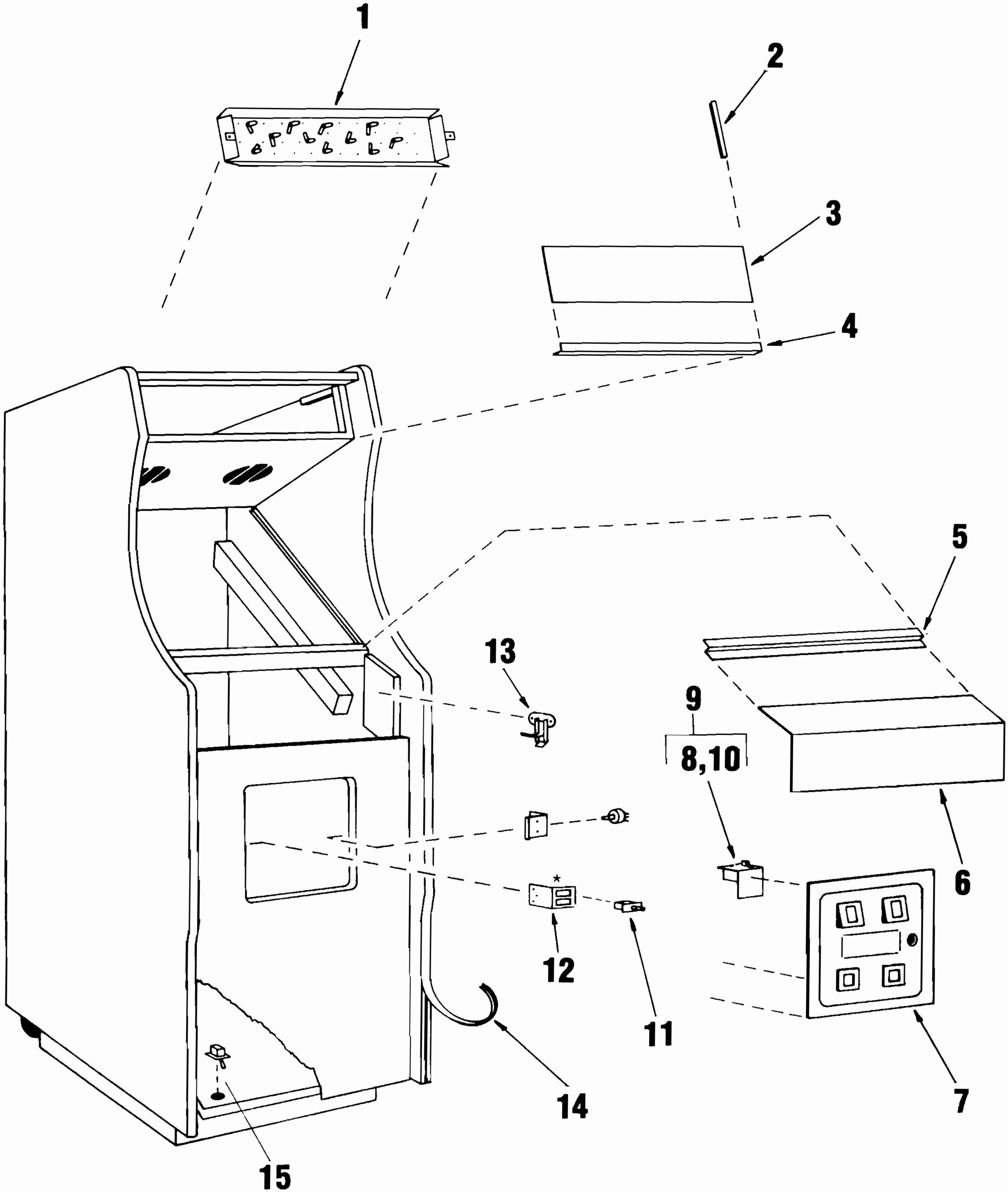
FIGURE 14

ITEM	TAITO PART NO.	DESCRIPTION
1	07M00055-002	INCANDESCENT PANEL
2	63B00006-003	"U" CHANNEL BRACKET
3	47-00012-012	MARQUEE
4	61C00115-001	MARQUEE RETAINING BRACKET
5	61D00012-001	LOWER COVERGLASS BRACKET
6	07-00217-001	CONTROL PANEL ASSEMBLY
7	07-00114-001	COIN DOOR
8	61B00113-001	SWITCH BRACKET
9	07-00118-001	SERVICE SWITCH ASSEMBLY
10	29-00022-001	SLIDE, CENTER RETURN SWITCH
11	29B00015-001	INTERLOCK SWITCH
12	61B00114-001	INTERLOCK SWITCH BRACKET
13	59-00008-001	LATCHING CLAMP
14	63B00002-004	"T" MOLDING
15	29A00023-001	POWER ON OFF SWITCH
*	09-00227-001	MAIN HARNESS CABLE
*	09-00043-001	SPEAKER CABLE
*	59-00046-001	SWITCH BARRIER

*Item not shown on drawing.

CABINET ASSEMBLY FRONT VIEW

FIGURE 14



CABINET ASSEMBLY REAR VIEW

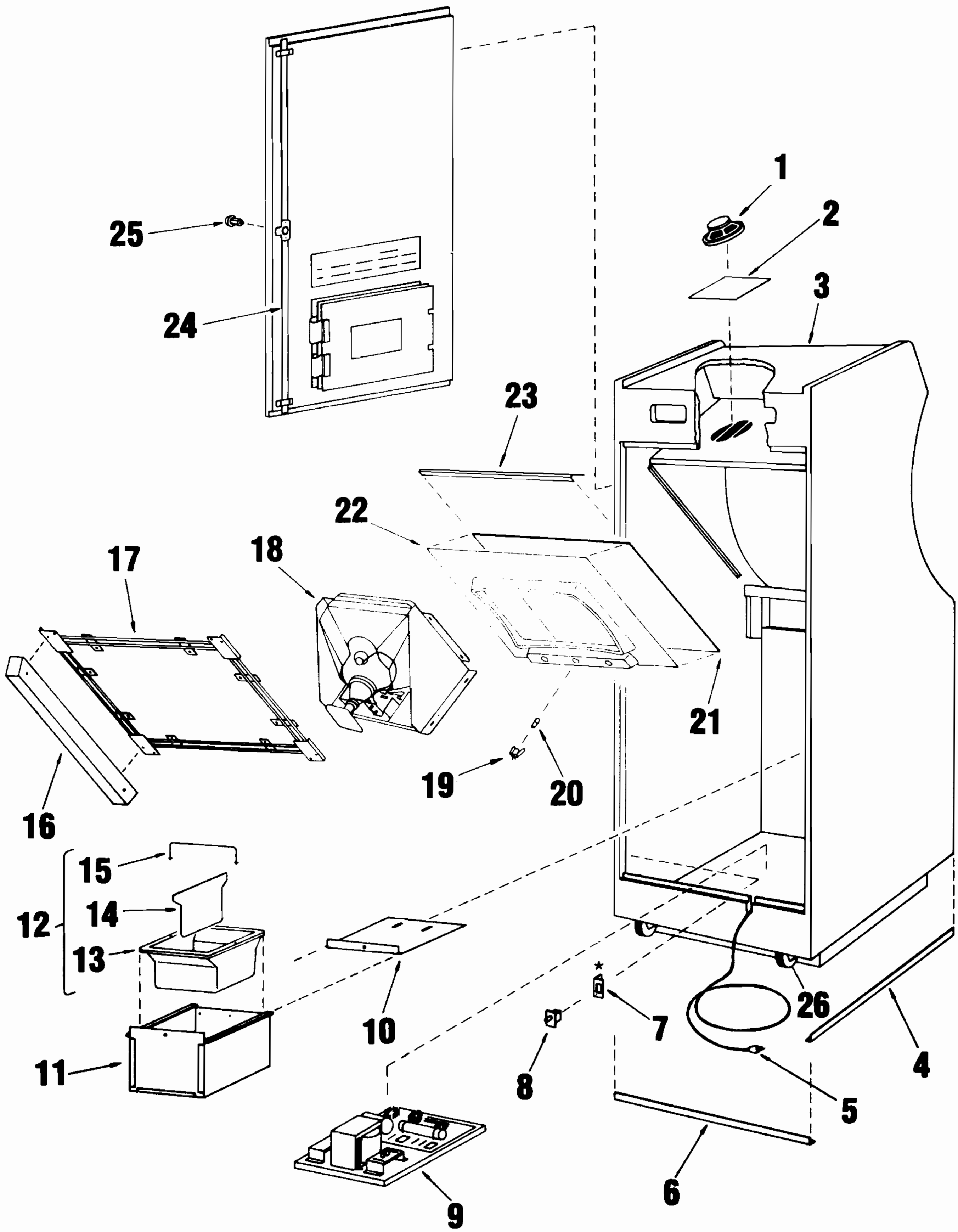
FIGURE 15

ITEM	TAITO PART NO.	DESCRIPTION
1	07-00083-001	SPEAKER
2	61B00038-001	SPEAKER GRILL
3	41-00015-007	FINISHED CABINET
4	63C00005-004	"L" MOLDING
5	07M00042-001	A/C LINE CORD ASSEMBLY
*5A	22-00001-001	LINE FILTER
6	63C00005-002	"L" MOLDING
7	61B00030-002	INTERLOCK BRACKET
8	29B00015-001	INTERLOCK SWITCH
9	07M00039-001	POWER SUPPLY
*9A	18-00003-001	TRANSFORMER
*9B	08-00007-001	BOARD
*9C	07-00041-001	HEAT SINK ASSEMBLY
10	61C00054-001	CASH BOX LID
11	61D00060-001	CASH BOX
12	07M00054-001	CASH TRAY ASSEMBLY
13	63R00010-001	CASH TRAY (ONLY)
14	63-00019-001	CASH TRAY SEPARATOR
15	61B00039-001	CASH TRAY HANDLE
16	42C00013-001	MONITOR SUPPORT CLEAT
17	61D00208-001	CRT SUPPORT FRAME
18	31-00013-001	19" COLOR MONITOR
19	26B00008-001	SOCKET LAMP
20	27-00006-001	#47 BULB
21	47-00016-004	COVERGLASS
22	63D00053-001	MONITOR SHROUD
23	61C00006-001	UPPER COVERGLASS BRACKET
24	61-00142-001	LOCK ROD ASSEMBLY
25	04-00037-002	LOCK ASSEMBLY
26	44C00001-001	WHEELS
*	59-00045-001	SWITCH BARRIER

*Item not shown on drawing

CABINET ASSEMBLY REAR VIEW

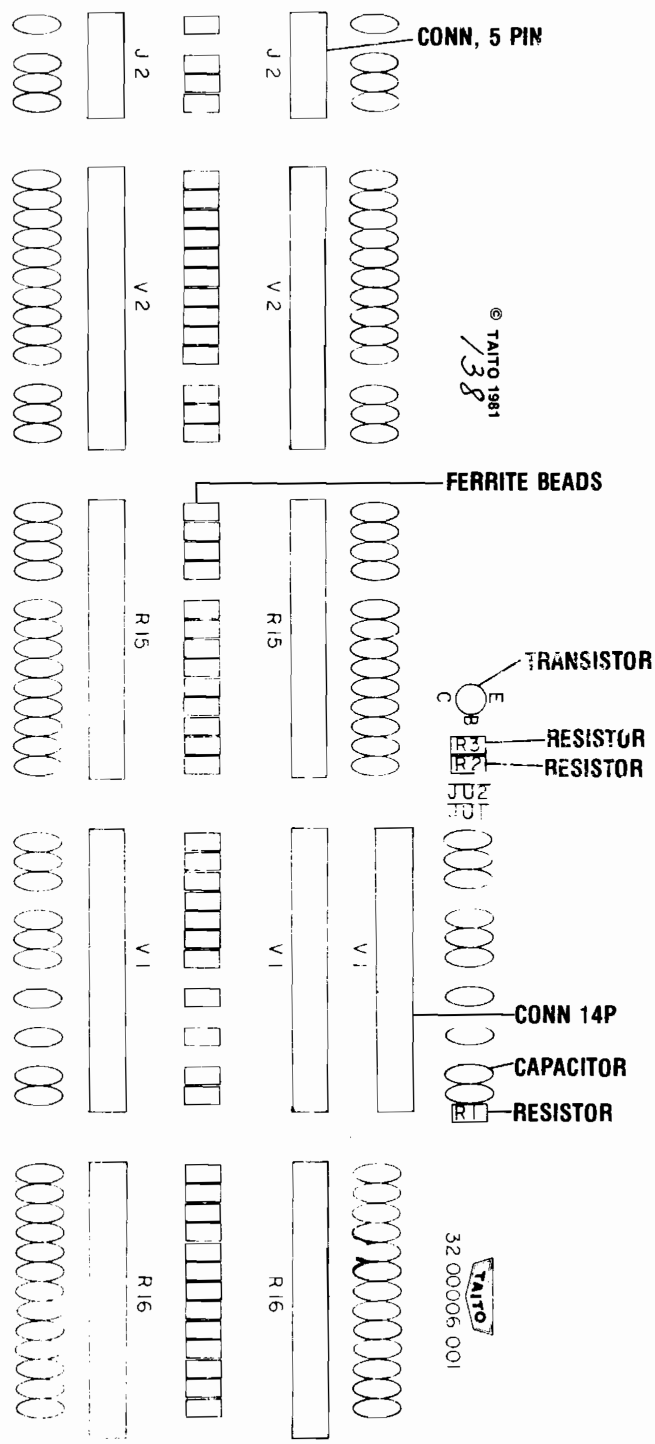
FIGURE 15



FILTER BOARD

FIGURE 16

ITEM	TAITO PART NO.	DESCRIPTION	QUANITY
1	12-10003-471	Cap, 470pf ± 10% Axial Lead	74
2	17-00001-001	Ferrite Bead Assembly	42
3	25-00002-014	Connector 14P	9
4	25-00002-005	Connector 5P	2
5	14-23904-001	Translstor NPN 2N3904	1
6	11-00001-102	Resistor 1K ohm ¼W	1
7	11-00001-332	Resistor 3.3F ohm ¼W	2
8	63B00068-001	Stand Off	6



POWER SUPPLY

FIGURE 17

SYM	TAITO PART NO.	DESCRIPTION
R1	11-00001-102	Resistor 1.0K 5% ¼W 5%
R2	11-00001-512	Resistor 5.1K ¼W 5%
R3	11-00001-183	Resistor 18K ¼W 5%
R4	11-00001-224	Resistor 220K ¼W 5%
R5	11-00001-472	Resistor 4.7K ¼W 5%
R6	11-00001-222	Resistor 2.2K ¼W 5%
R7	11-10001-101	Resistor 100 ¼W 5%
R8	11-00001-102	Resistor 10K ¼W 5%
R9	11-00001-472	Resistor 4.7K ¼W 5%
R10	11-10001-101	Resistor 100 ½W 5%
R11	11-30001-015	Resistor .15 4W 5%
R12	11-30001-015	Resistor .15 4W 5%
R13	11-00001-472	Resistor 4.7K ¼W 5%
R14	11-00001-222	Resistor 2.2K ¼W 5%
R15	11-00001-222	Resistor 2.2K ¼W 5%
R16	11-60001-252	Pot 2.5K ¼W 20%
R17	11-00001-222	Resistor 2.2K ¼W 5%
R18	11-60001-102	Pot 1.0K ¼W 20%
R19	11-00001-511	Resistor 510 ¼W 5%
R20	11-10001-470	Resistor 47 ½W 5%
R21	11-00001-162	Resistor 1.6K ¼W 5%
R22	11-00001-103	Resistor 10K ¼W 5%
R23	11-00001-472	Resistor 4.7K ¼W 34
R24	11-00001-222	Resistor 2.2K ¼W 5%
R25	11-60001-102	Pot 1.0K ¼W 5%
R26	11-00001-472	Resistor 407K ¼W 5%
R27	11-00001-222	Resistor 2.2K ¼W 5%
R28	11-60001-252	Pot 2.5K ¼W 20%
R29	11-00001-472	Resistor 4.7K ¼W 5%
R30	11-00001-122	Resistor 1.2K ¼W 5%
R31	11-10001-470	Resistor 47 ¼W 5%
R32	11-30001-015	Resistor .15 4W 5%
R33	11-00001-222	Resistor 2.2K ¼W 5%
R34	11-00001-122	Resistor 1.2K ¼W 5%
R35	11-00001-511	Resistor 510 ¼W 5%
R36	11-00001-222	Resistor 2.2K ¼W 5%
R37	11-00001-104	Resistor 100K
R38	11-00001-103	Resistor 10K ¼W 5%
R39	11-00001-224	Resistor 220L ¼W 5%
C1	12-30001-225	Capacitor, Tantalum 2.2uf 25V
C2	12-10004-103	Capacitor, Ceramic .01uf
C3	12-10004-103	Capacitor, Ceramic .01uf
C4	12-30001-105	Capacitor, Tantalum 1.uf 35V

SYM	TAITO PART NO.	DESCRIPTION
C5	12-10001-102	Capacitor, .001uf
C6	12-30001-106	Capacitor, Tantalum 10uf
C7	12-20003-509	Capacitor, Electrolytic 50,000uf
C8	12-30001-105	Capacitor, Tantalum 1.uf 35V
C9	12-20003-209	Capacitor, Electrolytic 20,000uf
C10	12-10001-332	Capacitor, Ceramic .0033uf
C11	12-30001-476	Capacitor, Tantalum 47uf
C12	12-30001-105	Capacitor, Tantalum 1.uf 35V
C13	12-10004-103	Capacitor, Ceramic .01uf
C14	12-10001-102	Capacitor, .001uf
C15	12-30001-476	Capacitor, Tantalum 47uf
C16	12-20002-108	Capacitor, Electrolytic 1,000uf
C17	12-30001-225	Capacitor, Tantalum 2.2uf 25V
C18	12-30001-225	Capacitor, Tantalum 2.2uf 25V
C19	12-30001-105	Capacitor, Tantalum 1.uf 35V
F1	24-00003-010	10A Fuse
F2	24-00003-010	10A Fuse
F3	24-00003-003	Fuse, 2A
F4	24-00003-004	Fuse, 4A
F5	24-00003-004	Fuse, 4A
BR1	13-00100-025	Diode Bridge 25A, 100V
BR2	13-00100-012	Diode Bridge 12A, 100V
BR3	13-00100-002	Diode Bridge 2A, 100V
D1	13-14002-001	Diode IN4002
D2	13-14002-001	Diode IN4002
D3	13-10752-001	Diode, Zener IN752
D4	13-14002-001	Diode IN4002
D5	13-14002-001	Diode IN4002
D6	13-14002-001	Diode IN4002
D7	13-10964-001	Diode, Zener IN964
D8	13-14002-001	Diode IN4002
D9	13-14002-001	Diode IN4002
D10	13-14002-001	Diode IN4002
D11	13-14002-001	Diode IN4002
D12	13-14002-001	Diode IN4002
LED1	13-00001-001	LED (Red)
LED2	13-00001-001	LED (Red)
LED3	13-00001-001	LED (Red)
LED4	13-00001-001	LED (Red)
U1	15-62500-001	Opto Coupler H11AA2
U2	15-50556-001	Timer (Dual) 556
U3	15-50723-001	Voltage Regulator 723
U4	15-50723-001	Voltage Regulator 723

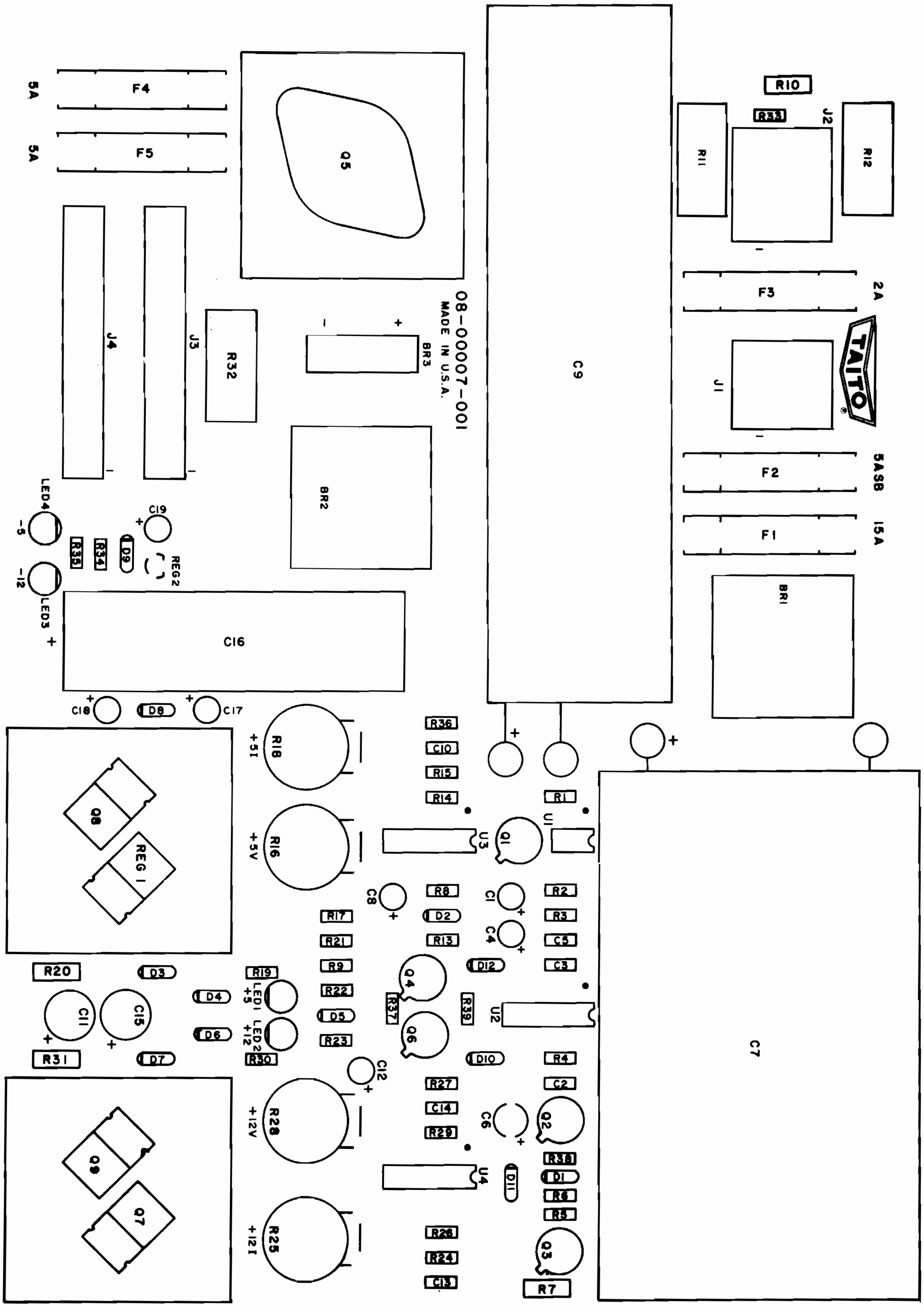
POWER SUPPLY

FIGURE 17

SYM	TAITO PART NO.	DESCRIPTION
REG1	15-57912-001	Voltage Regulator 7912
REG2	15-57905-001	Voltage Regulator 79L05
Q1	14-22905-001	Transistor 2N2905
Q2	14-22905-001	Transistor 2N2905
Q3	14-22905-001	Transistor 2N2905
Q4	14-22905-001	Transistor 2N2905
Q5	14-23055-001	Transistor 2N3055
Q6	14-22905-001	Transistor 2N2905
Q7	14-20030-001	Transistor TIP-30A
Q8	14-26401-001	SCR 2N6401
Q9	14-26401-001	SCR 2N6401
J1	25-00022-006	Connector, 1-380999-0 6Pin
J2	25-00022-008	Connector, 350212-1 8Pin
J3	25-00002-014	Connector, 09-60-1141 14Pin
J4	25-00002-014	Connector, 09-60-1140 14Pin
	24-10001-001	Fuse Clips
	30-00220-002	Heat Sink Dual To-220
	30-00003-001	Heat Sink Single To-3

POWER SUPPLY COMPONENT LAYOUT

FIGURE 17



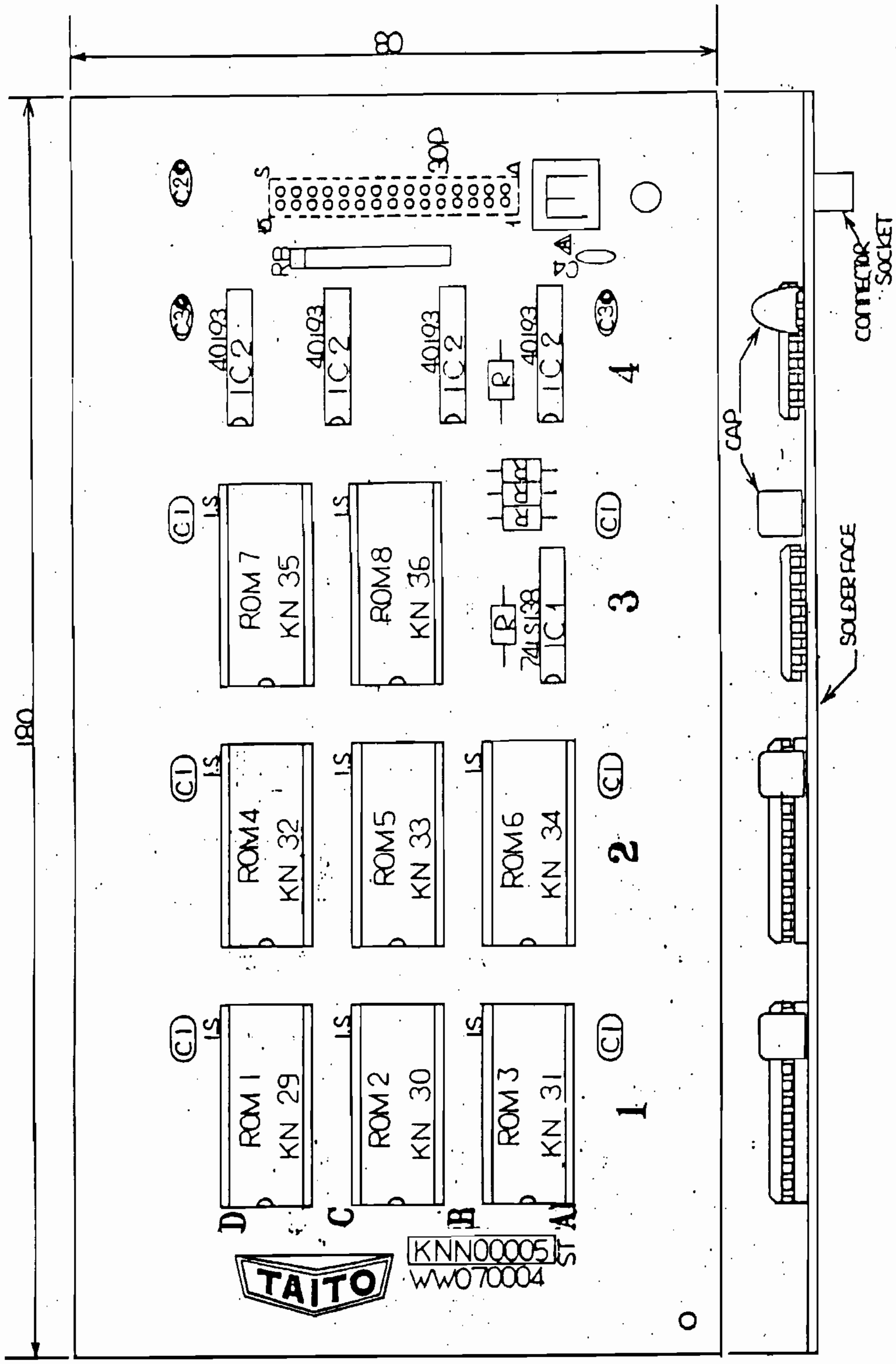
ROM BOARD

FIGURE 18

ITEM	SYM	TAITO PART NO.	DESCRIPTION
1		99-KNN0005	ROM PC BOARD
2			NOT USED
3	30P	99-AA055161	CONNECTOR SOCKET HKP-30FD
4	1S	99-AA055787	IC - SOCKET 24P
5	ST	99-KN070205	P.C.B. STICKER KNN0005
6	IC1	99-AAT33096	LS - IC 74LS138
7	IC2	99-AAT36071	CMOS 40193
8	ROM 1	99-KN090429	PROM (2732) KN29
9	ROM 2	99-KN090430	PROM (2732) KN30
10	ROM 3	99-KN090431	PROM (2732) KN31
11	ROM 4	99-KN090432	PROM (2732) KN32
12	ROM 5	99-KN090433	PROM (2732) KN33
13	ROM 6	99-KN090434	PROM (2732) KN34
14	ROM 7	99-KN090435	PROM (2732) KN35
15	ROM 8	99-KN090436	PROM (2732) KN36
16			NOT USED
17	C1	99-AAT41244	CAP, FILM TDY-1H-104
18	C2	99-AAT41430	CAP, TANTALUM SSG25-10F
19	C3	99-AAT41436	CAP, TANTALUM SSG35-1F
20	R	99-AAT51765	RES, CARBON 1 KOHM 1/4W 5%
21	RB	99-AAT55048	TINNED COPPER WIRE 10
22	C4	99-AAT41324	CAP, CERAMIC 180P 50V

ROM BOARD COMPONENT LAYOUT

FIGURE 18



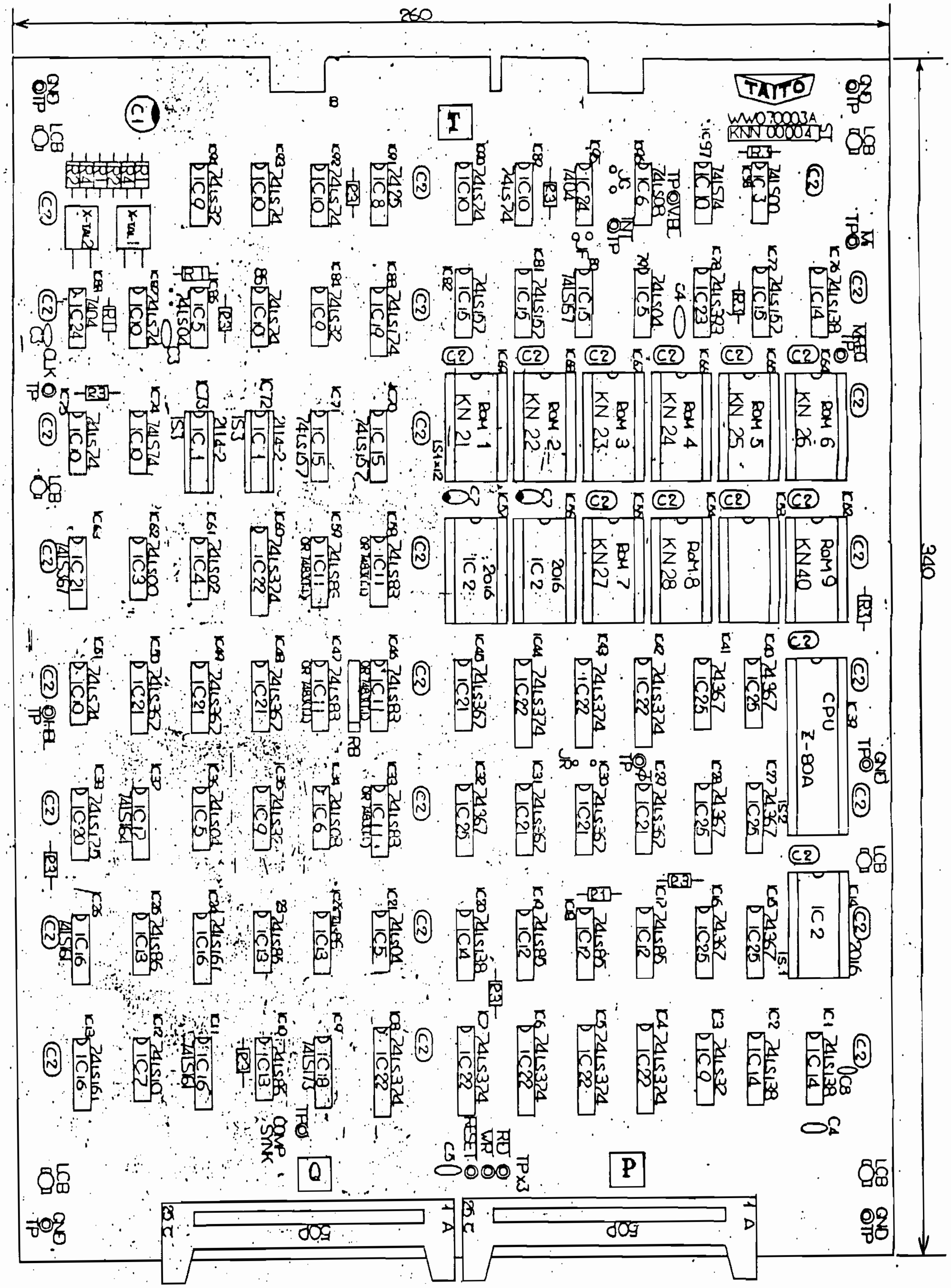
CPU BOARD

FIGURE 19

ITEM	SYM	TAITO PART NO.	DESCRIPTION
1		99-KNN00004	CPU BOARD
2	ST	99-KNN00004	PC BOARD STICKER
3	50P	99-AA055310	ANGLE PIN HEADER FC-50A
4	1S1	99-AA055787	IC - SOCKET 24P
5	1S2	99-AA055812	IC - SOCKET 40P
6	TP	99-AA056551	TEST POINT
7	XTAL 2	99-AA069605	X-TAL 12MHZ
8	XTAL 1	99-AA069608	X-TAL 8MHZ
9	1S3	99-AA055103	IC - SOCKET 18P
10	CB	99-AA069557	LOCKING CIRCUIT BOARD SUPPORT
11	IC1	99-AAT32163	STATIC RAM 2114-7
12	IC2	99-AAT32178	STATIC RAM TMM2016P
13	IC3	99-AAT33001	LS-IC 74LS00
14	IC4	99-AAT33003	LS-IC 74LS02
15	IC5	99-AAT33005	LS-IC 74LS04
16	IC6	99-AAT33009	LS-IC 74LS08
17	IC7	99-AAT33011	LS-IC 74LS10
18	IC8	99-AAT32006	TTL-IC 7425
19	IC9	99-AAT33027	LS-IC 74LS32
20	IC10	99-AAT33051	LS-IC 74LS74
21	IC11	99-AAT33059	LS-IC 74LS83
22	IC12	99-AAT33061	LS-IC 74LS85
23	IC13	99-AAT33062	LS-IC 74LS86
24	IC14	99-AAT33096	LS-IC 74LS138
25	IC15	99-AAT33112	LS-IC 74LS157
26	IC16	99-AAT33116	LS-IC 74LS161
27	IC17	99-AAT33119	LS-IC 74LS164
28	IC18	99-AAT33126	LS-IC 74LS173
29	IC19	99-AAT33127	LS-IC 74LS174
30	IC20	99-AAT33128	LS-IC 74LS175
31	IC21	99-AAT33203	LS-IC 74LS367
32	IC22	99-AAT33209	LS-IC 74LS374
33	IC23	99-AAT33220	LS-IC 74LS393
34	CPU	99-AAT34008	CPU 7-80A
35	IC24	99-AAT32003	TTL-IC 7404
36	IC25	99-AAT32099	TTL-IC 74367
37	C1	99-AAT41023	CAP, ELECTROLYTIC 16VB220
38	C2	99-AAT41244	CAP, FILM TDY-1H-104
39	C3	99-AAT41302	CAP, CERAMIC 22PF50V
40	C4	99-AAT41324	CAP, CERAMIC 180PF50V
41	C5	99-AAT41330	CAP, CERAMIC 330PF50V
42			NOT USED
43	C7	99-AAT41436	CAP, TANTALUM SSG35-1F
44	R1	99-AAT51749	RES, CARBON 220 OHM 1/4W 5%
45	R2	99-AAT51759	RES, CARBON 560 OHM 1/4W 5%
46	R3	99-AAT51265	RES, CARBON 1 K OHM 1/4W 5%
47	R4	99-AAT51771	RES, CARBON 1.8K
48	ROM 1	99-KN090421	PROM (2732) KN29
49	ROM 2	99-KN090422	PROM (2732) KN30
50	ROM 3	99-KN090423	PROM (2732) KN31
51	ROM 4	99-KN090424	PROM (2732) KN32
52	ROM 5	99-KN090425	PROM (2732) KN33
53	ROM 6	99-KN090426	PROM (2732) KN34
54	ROM 7	99-KN090427	PROM (2732) KN35
55	ROM 8	99-KN090428	PROM (2732) KN36
56	ROM 9	99-KN090440	PROM (2732) KN40
57		NOT USED	
58		NOT USED	
59		NOT USED	
60		NOT USED	
61	C8	99-AAT41318	CAP, CERAMIC DT-201 100pf 50V
62	RB	99-AAT55038	RESISTOR BLOCK 1 OHM 8 ELEMENTS

CPU BOARD COMPONENT LAYOUT

FIGURE 19



VIDEO BOARD

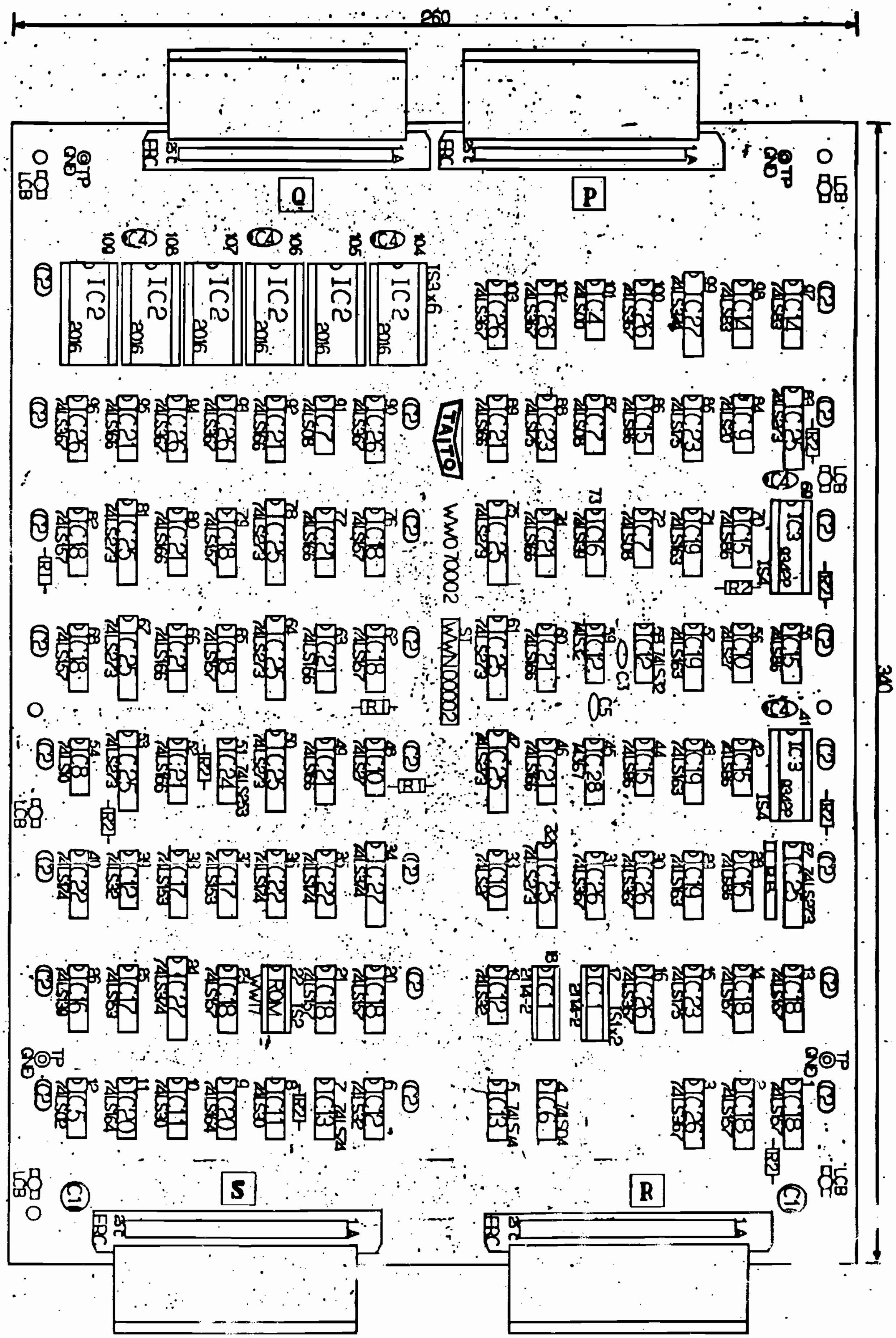
FIGURE 20

ITEM	SYM	TAITO PART NO.	DESCRIPTION
1		99-WW070002	VIDEO PC BOARD
2			NOT USED
3	FRC	99-AAS00262	FRC HARNESS ASSY 50P
4	IS1	99-AA055103	IC SOCKET 18P
5	IS2	99-AA055786	IC SOCKET 16P
6	IS3	99-AA055787	IC SOCKET 24P
7	IS4	99-AA055999	IC SOCKET 22P
8	TP	99-AA056551	TEST POINT CHIP
9	CB	99-AA069589	LOCKING CIRCUIT BOARD SUPPORT
10	IC1	99-AAT32163	STATIC RAM 2114-2
11	IC2	99-AAT32178	STATIC RAM TMM2016P
12	IC3	99-AAT32180	TTL-RAM 93422
13	IC4	99-AAT33001	LS-IC 74LS00
14	IC5	99-AAT33003	LS-IC 74LS02
15	IC6	99-AAT33005	LS-IC 74LS04
16	IC7	99-AAT33009	LS-IC 74LS08
17	IC8	99-AAT33011	LS-IC 74LS10
18	IC9	99-AAT33019	LS-IC 74LS20
19	IC10	99-AAT33024	LS-IC 74LS27
20	IC11	99-AAT33026	LS-IC 74LS30
21	IC12	99-AAT33027	LS-IC 74LS32
22	IC13	99-AAT33051	LS-IC 74LS74
23	IC14	99-AAT33059	LS-IC 74LS83
24	IC15	99-AAT33062	LS-IC 74LS86

ITEM	SYM	TAITO PART NO.	DESCRIPTION
25	IC16	99-AAT33097	LS-IC 74LS139
26	IC17	99-AAT33108	LS-IC 74LS153
27	IC18	99-AAT33112	LS-IC 74LS157
28	IC19	99-AAT33118	LS-IC 74LS163
29	IC20	99-AAT33119	LS-IC 74LS164
30	IC21	99-AAT33121	LS-IC 74LS166
31	IC22	99-AAT33127	LS-IC 74LS174
32	IC23	99-AAT33128	LS-IC 74LS175
33	IC24	99-AAT33163	LS-IC 74LS253
34	IC25	99-AAT33170	LS-IC 74LS273
35	IC26	99-AAT33203	LS-IC 74LS367
36	IC27	99-AAT33209	LS-IC 74LS374
37	IC28	99-AAT32099	LS-IC 74LS367
38	ROM	99-AAT90417	ROM (745287) WW17
39			NOT USED
40	C1	99-AAT41023	CAP, ELECTROLYTIC 16VB220
41	C2	99-AAT41244	CAP, FILM TDY-1H-104
42	C3	99-AAT41324	CAP, CERAMIC DT-203-180P
43	C4	99-AAT41436	CAP, TANTALUM SSG35-1F
44	R1	99-AAT51757	RES, CARBON 470 OHM 1/4W 5%
45	R2	99-AAT51765	RES, CARBON 1 OHM 1/4W 5%
46	RB	99-AAT55036	RESISTOR BLOCK 1K OHM 8 ELEMENTS
47	ST	99-WW070202	P C BOARD STICKER WWN00002
48	C5	99-AAT41318	CAP, CERAMIC DT20 100P

VIDEO BOARD COMPONENT LAYOUT

FIGURE 20



GAME BOARD

FIGURE 21

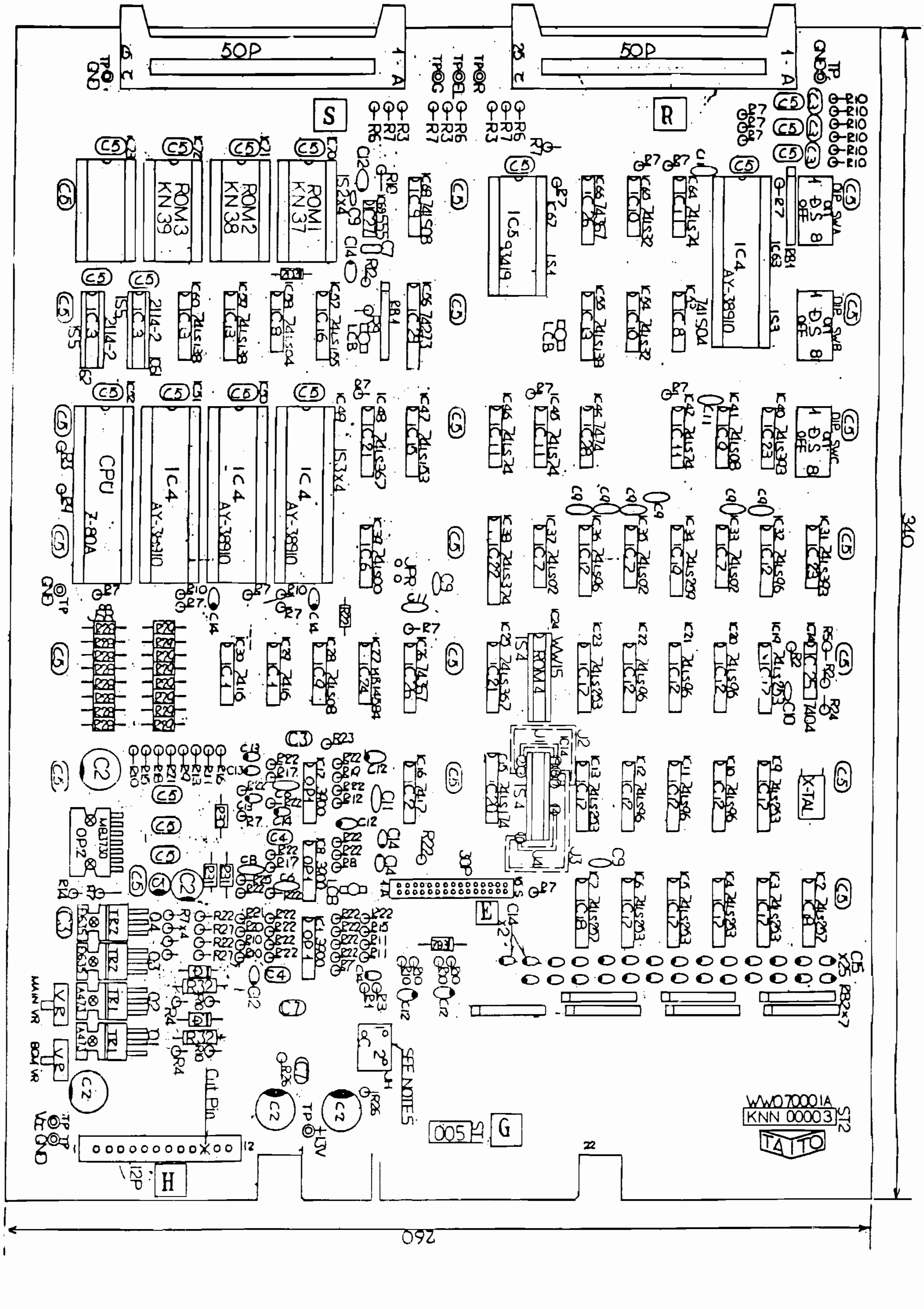
ITEM	SYM	TAITO PART NO.	DESCRIPTION
1		99-KNN00003	GAME PCB
2	IS5	99-AA055103	IC SOCKET 18P
3	DS	99-AA052566	DIP SWITCH
4	12P	99-AA055115	SL56 POST HEADER 12P
5	30P	99-AA055160	CONNECTOR PLUG HKP-30M
6	IS1	99-AA055169	IC SOCKET 28P
7	50P	99-AA055310	ANGLE PIN HEADER PS-50PA
8	IS2	99-AA055787	IC SOCKET 24P
9	IS3	99-AA055817	IC SOCKET 40P
10	IS4	99-AA055815	IC SOCKET 20P
11	TP	99-AA056551	TEST POINT
12	ICB	99-AA060557	LOCKING CIRCUIT BOARD SUPPORT
13	TR1	99-AAT11040	TRANSISTOR 25A423
14			PAN HD SCREW M3X6
15			NUT M3
16	TR7	99-AAT11070	TRANSISTOR 25D635
17			PAN HD SCREW M3X6
18			NUT M3
19	OP1	99-AAT31011	OP AMPLIFIER 1M3000
20	OP2	99-AAT31050	OP AMPLIFIER MR3230
21			PAN HD SCREW M3X8
22			NUT M3
23	IC1	99-AAT32033	TTL-IC 7416
24	IC2	99-AAT32049	TTL-IC 7417
25	IC3	99-AAT32163	STATIC RAM 2114.2
26	IC4	99-AAT32165	SOUND IC AY38910
27	IC5	99-AAT32179	TTL - RAM 93410
28	IC6	99-AAT33001	LS-IC 74LS00
29	IC7	99-AAT33003	LS-IC 74LS02
30	IC8	99-AAT33005	LS-IC 74LS04
31	IC9	99-AAT33008	LS-IC 74LS08
32	IC10	99-AAT33027	TI (ONLY) 74LS37
33	IC11	99-AAT33051	LS-IC 74LS74
34	IC12	99-AAT33020	LS-IC 74LS96
35	IC13	99-AAT33096	LS-IC 74LS138
36			NOT USED
37	IC15	99-AAT33108	LS-IC 74LS153
38	IC16	99-AAT33110	LS-IC 74LS155
39	IC17	99-AAT33163	LS-IC 74LS253
40	IC18	99-AAT33164	LS-IC 74LS257
41	IC19	99-AAT33166	LS-IC 74LS259
42	IC20	99-AAT33127	LS-IC 74LS174
43	IC21	99-AAT33203	LS-IC 74LS367
44	IC22	99-AAT33209	LS-IC 74LS374
45	IC23	99-AAT33220	LS-IC 74LS393
46	CPU	99-AAT34008	CPU Z-80A
47	IC24	99-AAT36105	CMOS MB14584
48	IC25	99-AAT32003	TTL-IC 7404
49	IC26	99-AAT32099	TTL IC 74367
50	IC27	99-AAT32019	TTL IC 7404
51	IC28	99-AAT32011	TTL IC 7474
52	IC29	99-AAT32151	TTL IC 74273
53			NOT USED
54	C1	99-AAT41019	CAP, ELECTROLYTIC 16VB220 MF
55	C2	99-AAT41023	CAP, ELECTROLYTIC 16VB220
56	C3	99-AAT41238	CAP, FILM TDY-1M-103
57	C4	99-AAT41740	CAP, FILM TDY-1H-223
58	C5	99-AAT41244	CAP, FILM TDY-1H-104
59	C6	99-AAT41310	CAP, CERAMIC 47PF 50V
60	C7	99-AAT41242	CAP, FILM
61	C8	99-AAT41322	CAP, CERAMIC 150PF 50V
62	C9	99-AAT41374	CAP, CERAMIC 180PF 50V
63	C10	99-AAT41302	CAP, CERAMIC 22pf 50V
64	C11	99-AAT41334	CAP, CERAMIC 470PF 50V
65	C12	99-AAT41430	CAP, TANTALUM SSG25-10F
66	C13	99-AAT41431	CAP, TANTALUM SSG35-OR1F
67	C14	99-AAT41436	CAP, TANTALUM SSG35-1F
68	C15	99-AAT41432	CAP, TANTALUM SSG35 7R2F
69	R1	99-AAT51741	RES, CARBON 100 OHM 1/2W 5%
70	R2	99-AAT51749	RES, CARBON 220 OHM 1/4W 5%
71	R3	99-AAT51751	RES, CARBON 270 OHM 1/4W 5%
72	R4	99-AAT51753	RES, CARBON 330 OHM 1/4W 5%
73	R5	99-AAT51759	RES, CARBON 560 OHM 1/4W 5%
74	R6	99-AAT51757	RES, CARBON 470 OHM 1/4W 5%
75	R7	99-AAT51765	RES, CARBON 1K
76	R8	99-AAT51779	RES, CARBON 3.9K 1/4W 5%
77	R9	99-AAT51781	RES, CARBON 4.7K OHM 1/4W 5%
78	R10	99-AAT51789	RES, CARBON 10K 1/4W 5%
79	R11	99-AAT51796	RES, CARBON 20K OHM 1/4W 5%
80	R12	99-AAT51797	RES, CARBON 22K OHM 1/4W 5%
81	R13	99-AAT51803	RES, CARBON 39K OHM 1/4W 5%
82	R14	99-AAT51775	RES, CARBON 82K OHM 1/4W 5%
83	R15	99-AAT51811	RES, CARBON 82K OHM 1/4W 5%
84	R16	99-AAT51812	RES, CARBON 100K 1/4 W 5%
85	R17	99-AAT51823	RES, CARBON 270K 1/4W 5%
86	R18	99-AAT51825	RES, CARBON 330K 1/4W 5%
87	R19	99-AAT51827	RES, CARBON 390K 1/4W 5%
88	R20	99-AAT51829	RES, CARBON 470K 1/4W 5%
89	R21	99-AAT51833	RES, CARBON 680K 1/4W 5%
90	R22	99-AAT51837	RES, CARBON 1M OHM 1/4W 5%
91	R23	99-AAT51733	RES, CARBON 47 OHM 1/4W 5%
92	R24	99-AAT51771	RES, CARBON 47 OHM 1/2W 5%

FIGURE 21

ITEM	SYM	TAITO PART NO.	DESCRIPTION
93	R25	99-AAT51845	RES, CARBON 22M OHM 1/4W 5%
94	R26	99-AAT51847	RES, CARBON 22M OHM 1/2W 5%
95	R27	99-AAT51772	RES, CARBON 2K OHM 1/4W 5%
96	R28	99-AAT51068	RES, CARBON 15 OHM 1/4W 5%
97	R29	99-AAT51969	RES, CARBON 30K OHM 1/4W 5%
98	R30	99-AAT51971	RES, CARBON 1M OHM 1/4W 5%
99	R31	99-AAT51982	RES, CARBON 1 OHM 1/4W 5%
100	VR	99-AAT53041	RES, VARIABLE RESISTOR B-50K
101	RB1	99-AAT55036	RESISTOR BLOCK 1K OHM 8 ELEMENTS
102	RB2	99-AAT55061	RESISTOR BLOCK 10K+100 OHM 108
109	R32	99-AAT55033	WINDING RESISTOR 6 OHM 2W 10%
104			NOT USED
105	ZD2	99-AAT13042	FENNER DIODE RD2 7FBF
106	ZD3	99-AAT13028	FENNER DIODE RD9A-M
107	ST	99-EE070004	HARNESS STICKER
108	ST2	99-KN070203	PCB STICKER KN00003
110	ROM 1	99-KN090437	PROM (2732) KN37
111	ROM 2	99-KN090438	PROM (2732) KN38
112	ROM 3	99-KN090439	PROM (2732) KN39
113			NOT USED
114			NOT USED
115	X-TAL	99-AA069593	X-TAL 6MHz
116		99-AA062644	JUMPER WIRE

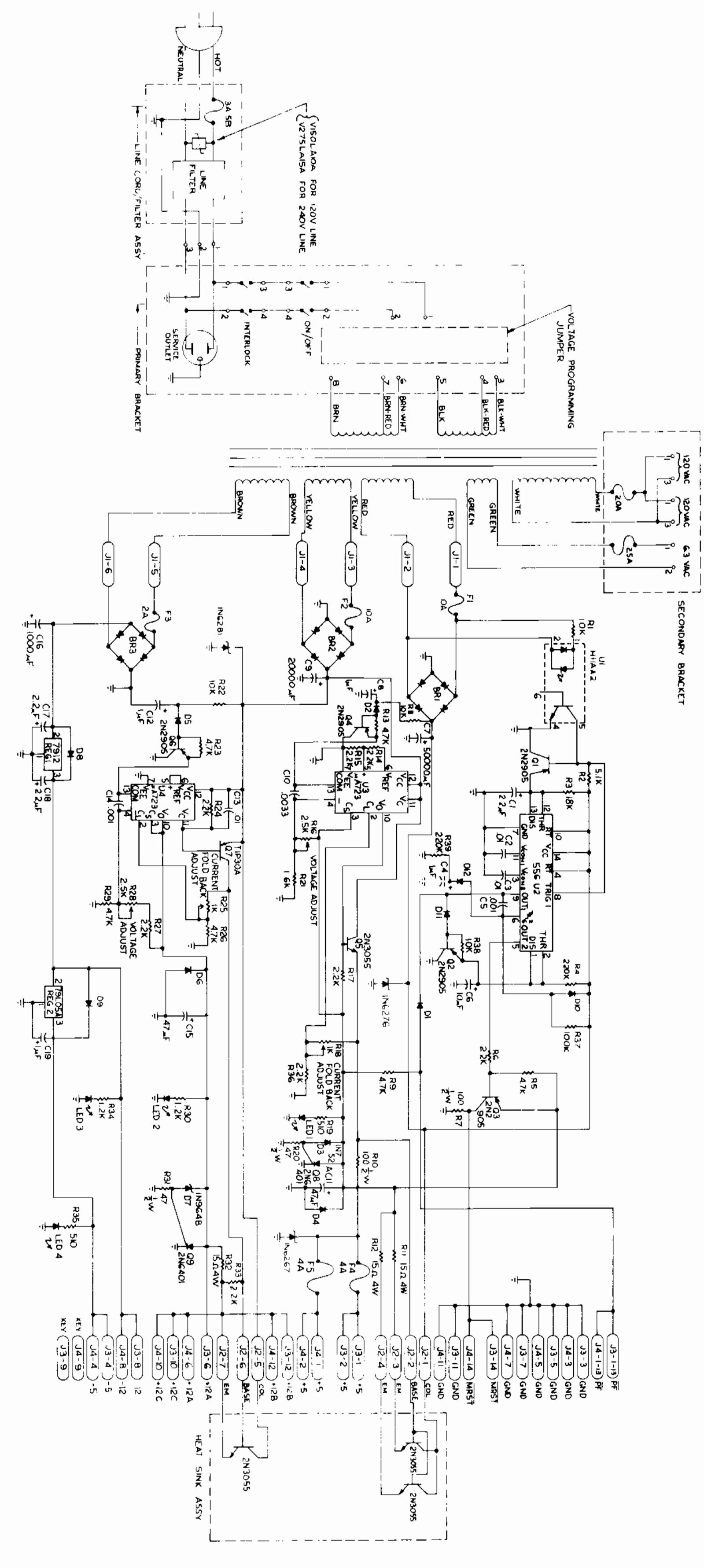
GAME BOARD COMPONENT LAYOUT

FIGURE 21



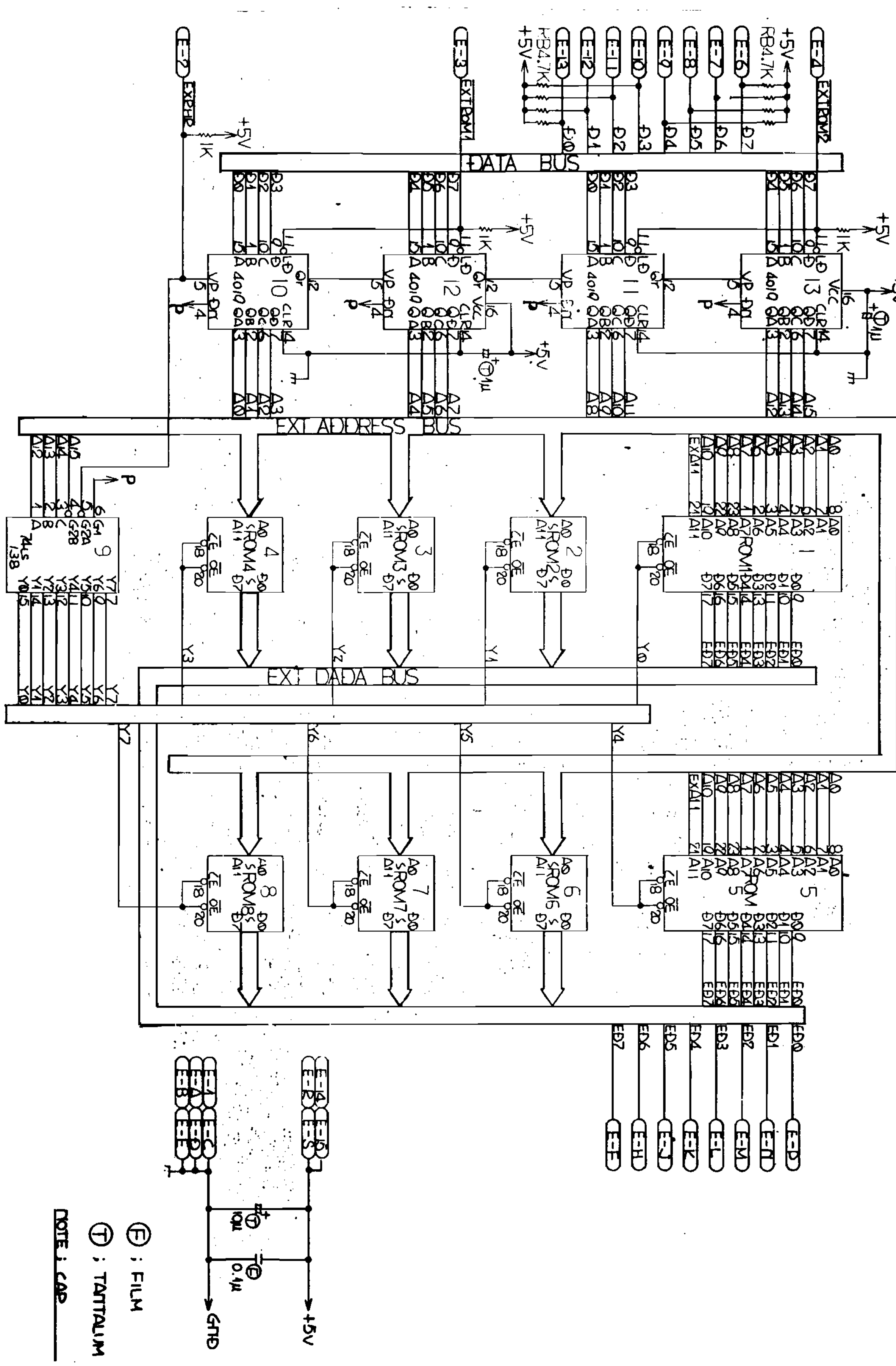
POWER SUPPLY SCHEMATIC 1 of 1

FIGURE 22



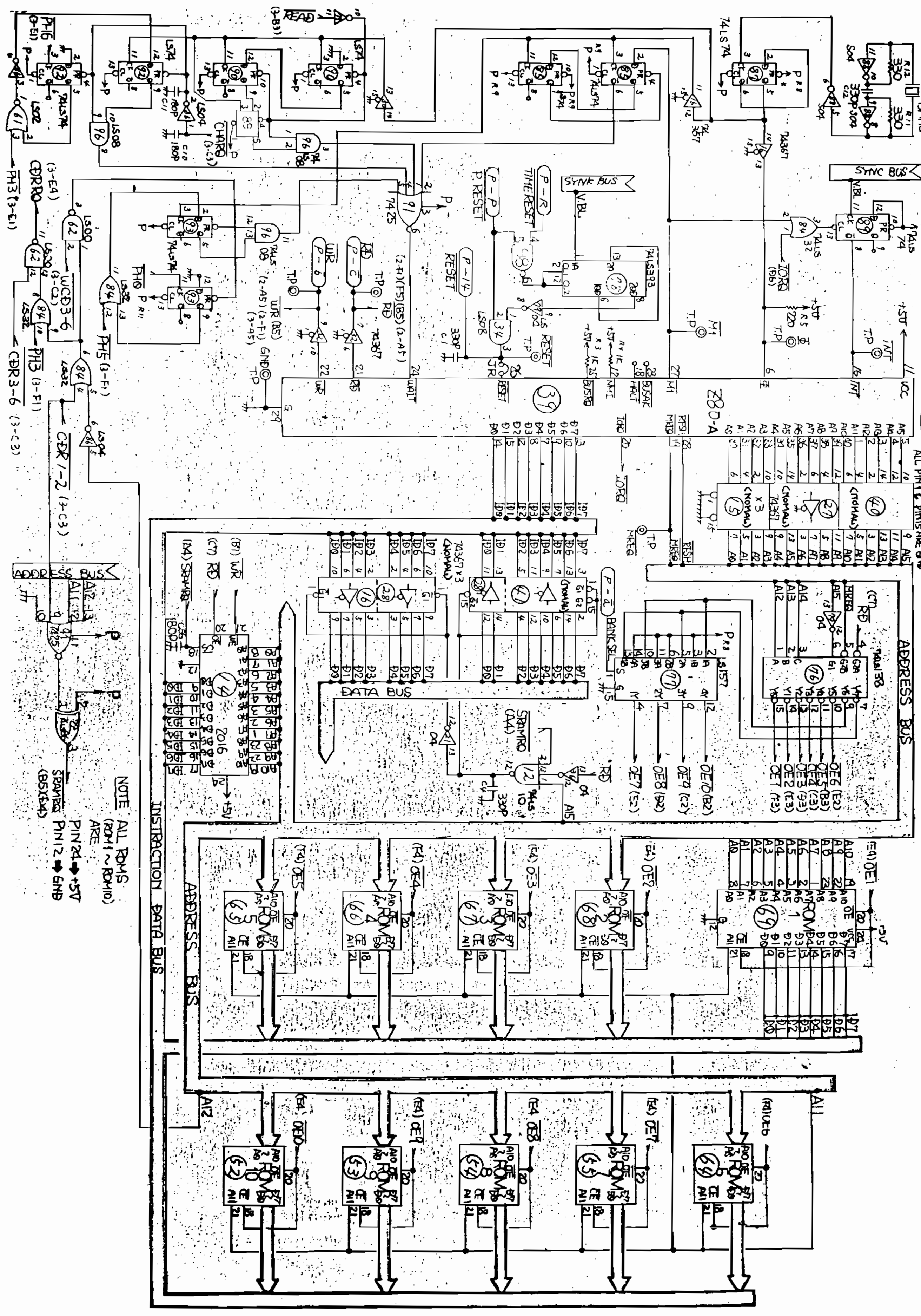
ROM PC BOARD SCHEMATIC 1 of 1

FIGURE 23



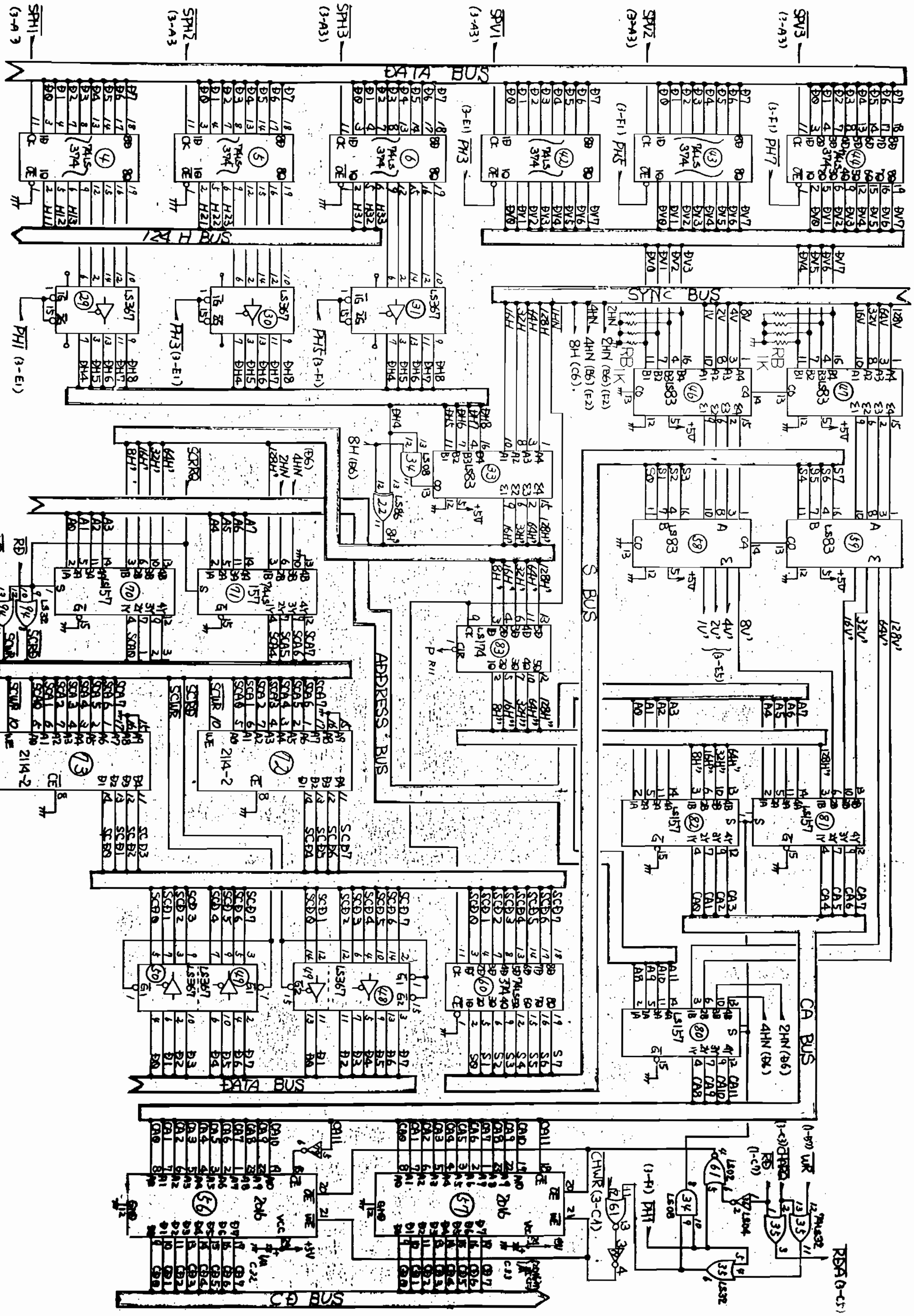
CPU PC BOARD SCHEMATIC 1 of 3

FIGURE 24



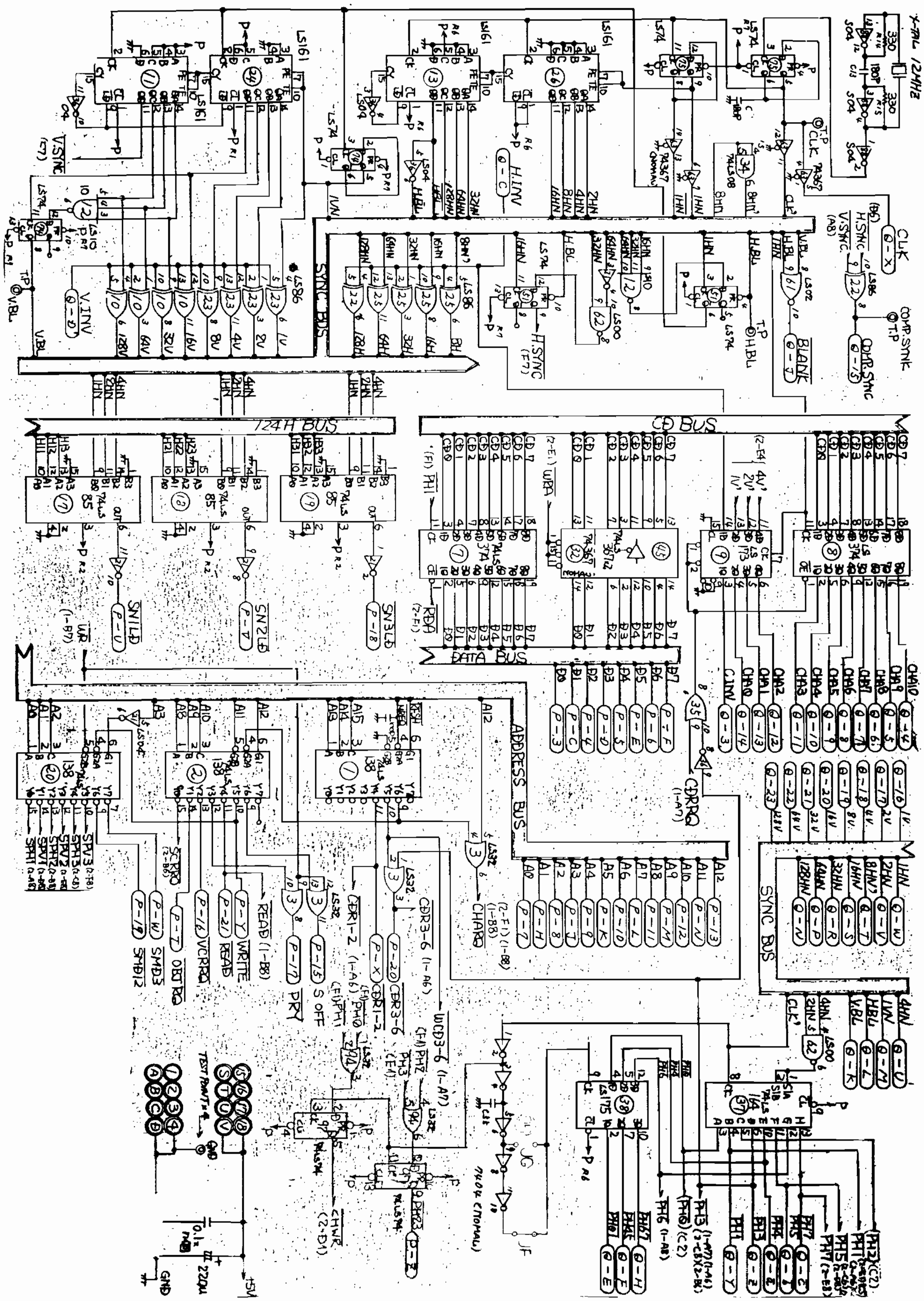
CPU PC BOARD SCHEMATIC 2 of 3

FIGURE 25



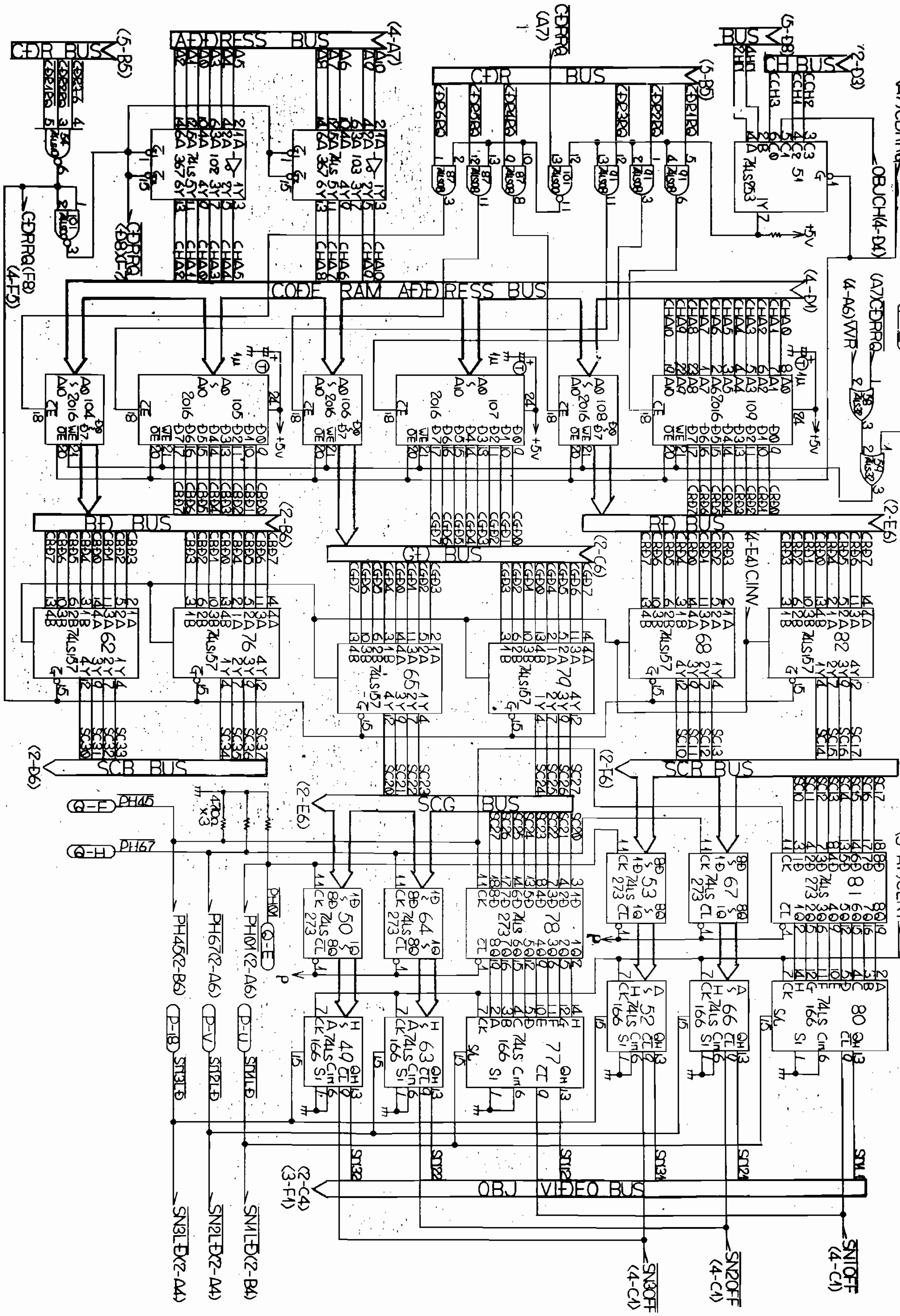
CPU PC BOARD SCHEMATIC 3 of 3

FIGURE 26



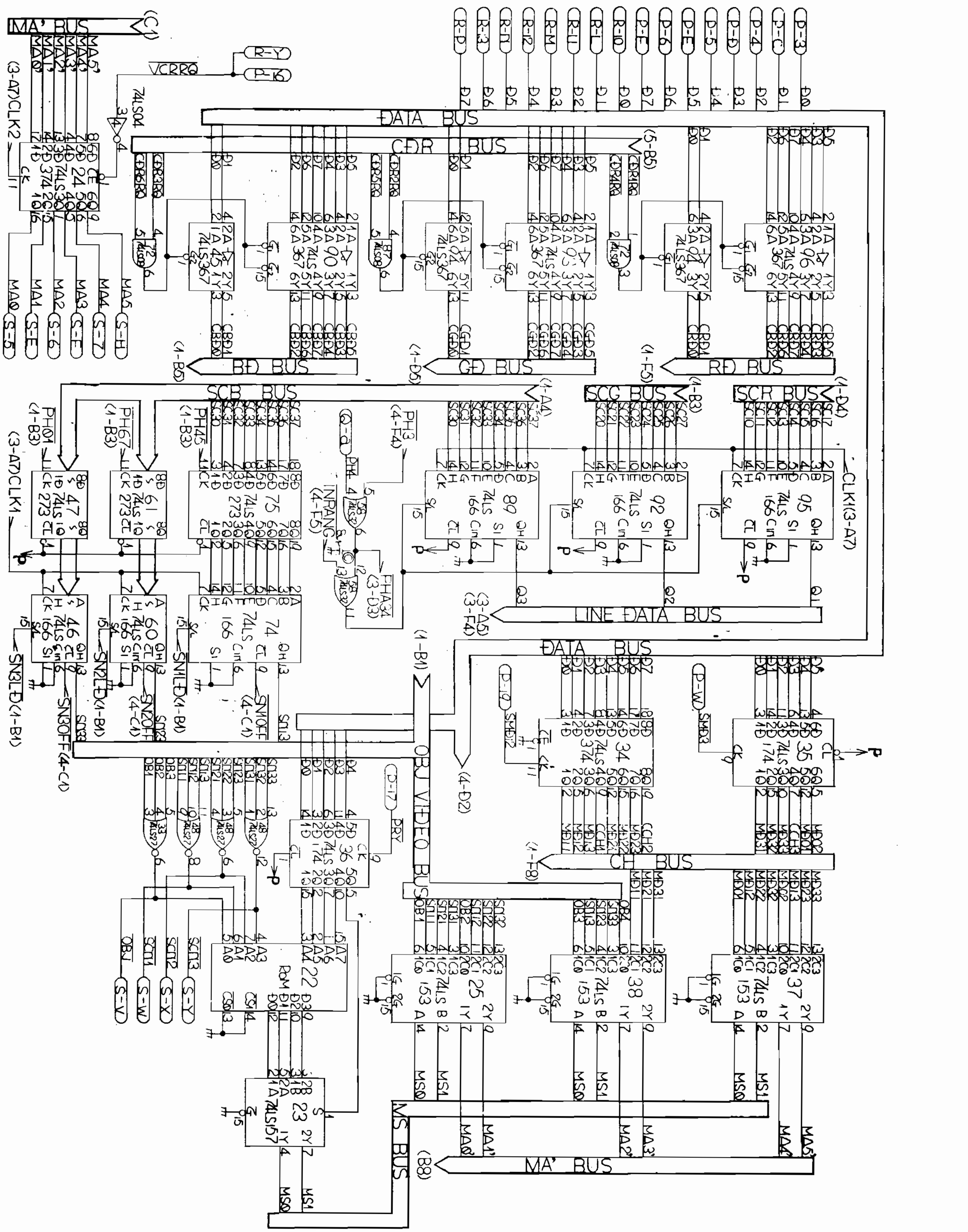
VIDEO PC BOARD SCHEMATIC 1 of 5

FIGURE 27



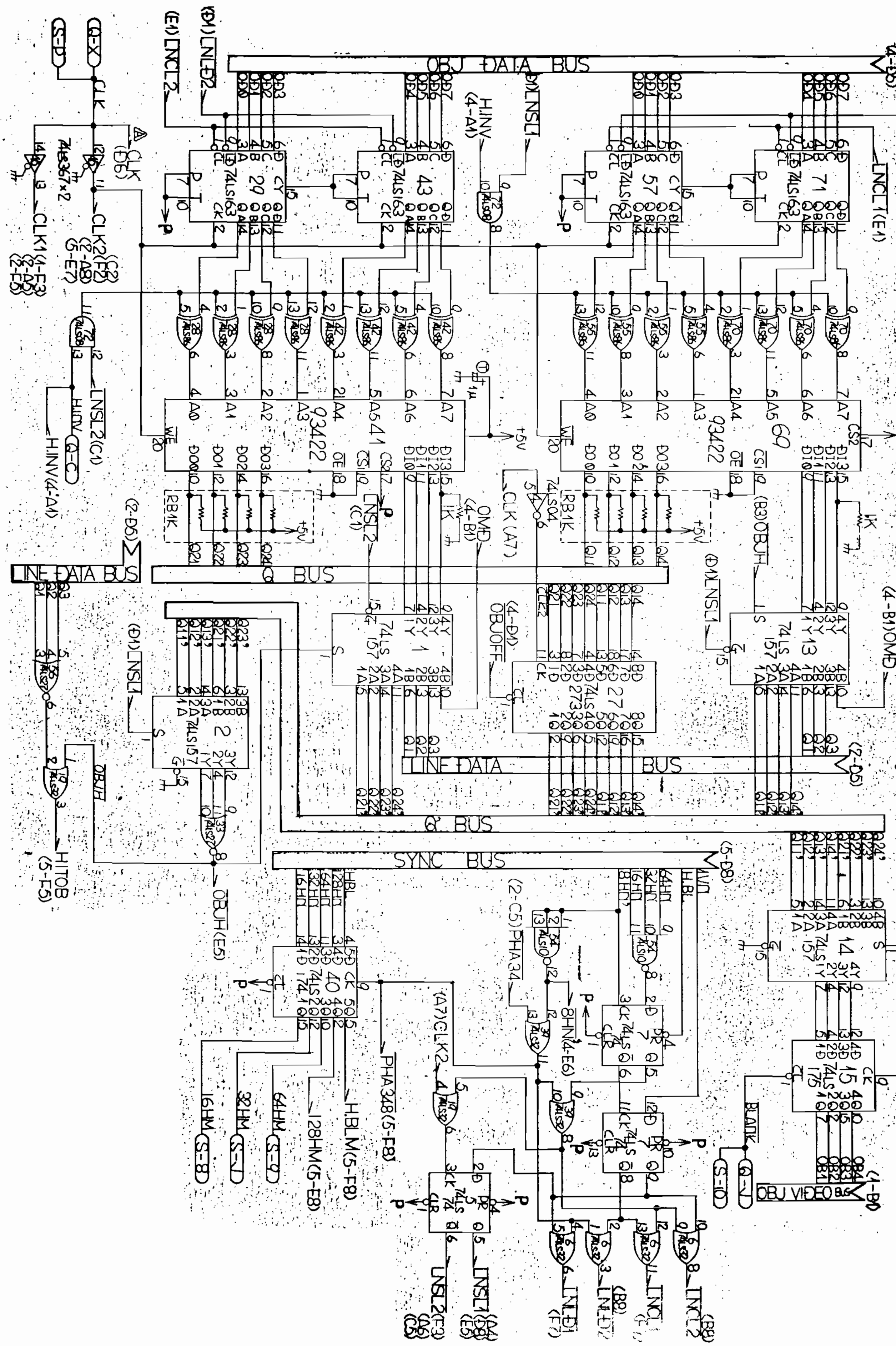
VIDEO PC BOARD SCHEMATIC 2 of 5

FIGURE 28



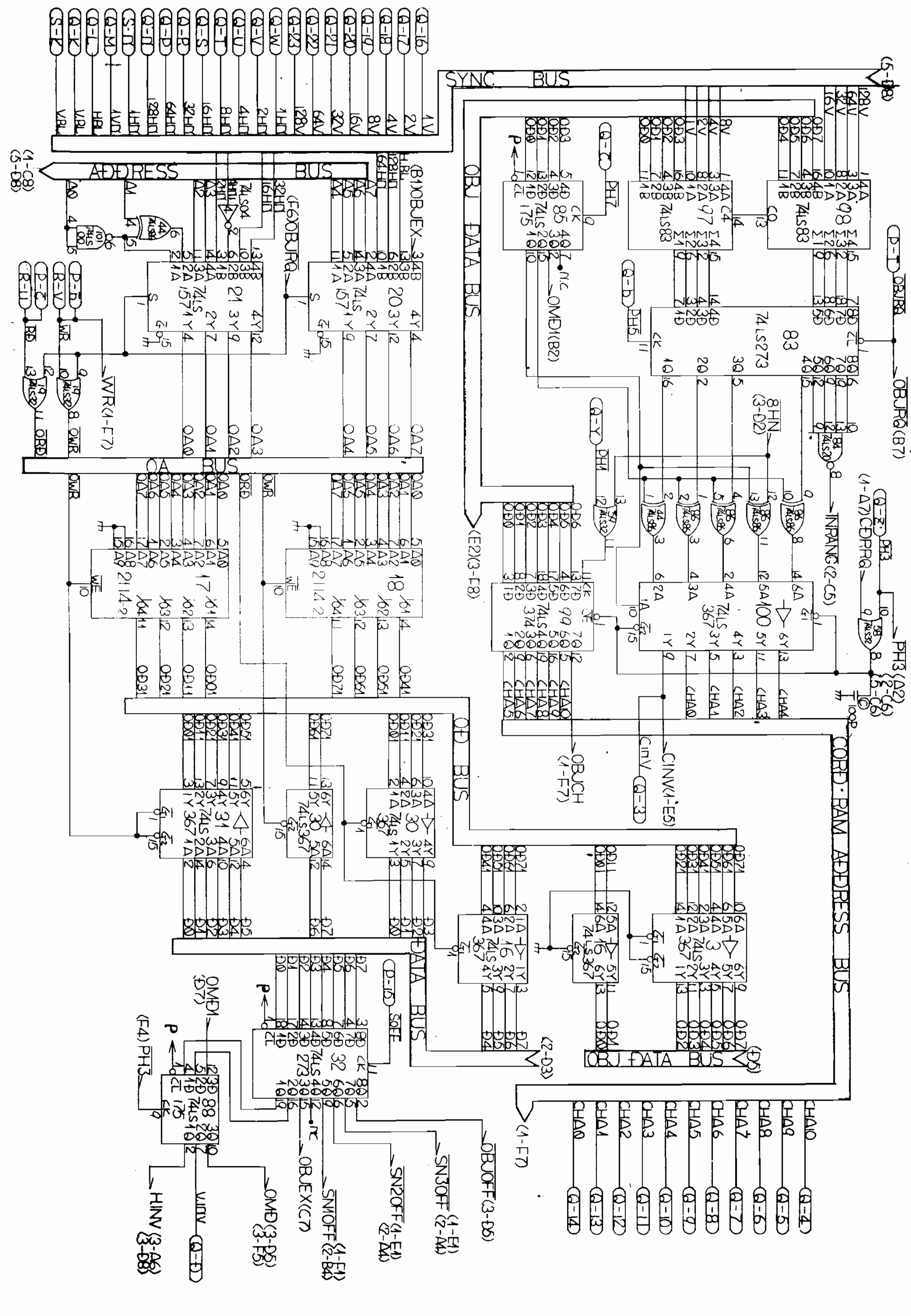
VIDEO PC BOARD SCHEMATIC 3 of 5

FIGURE 29



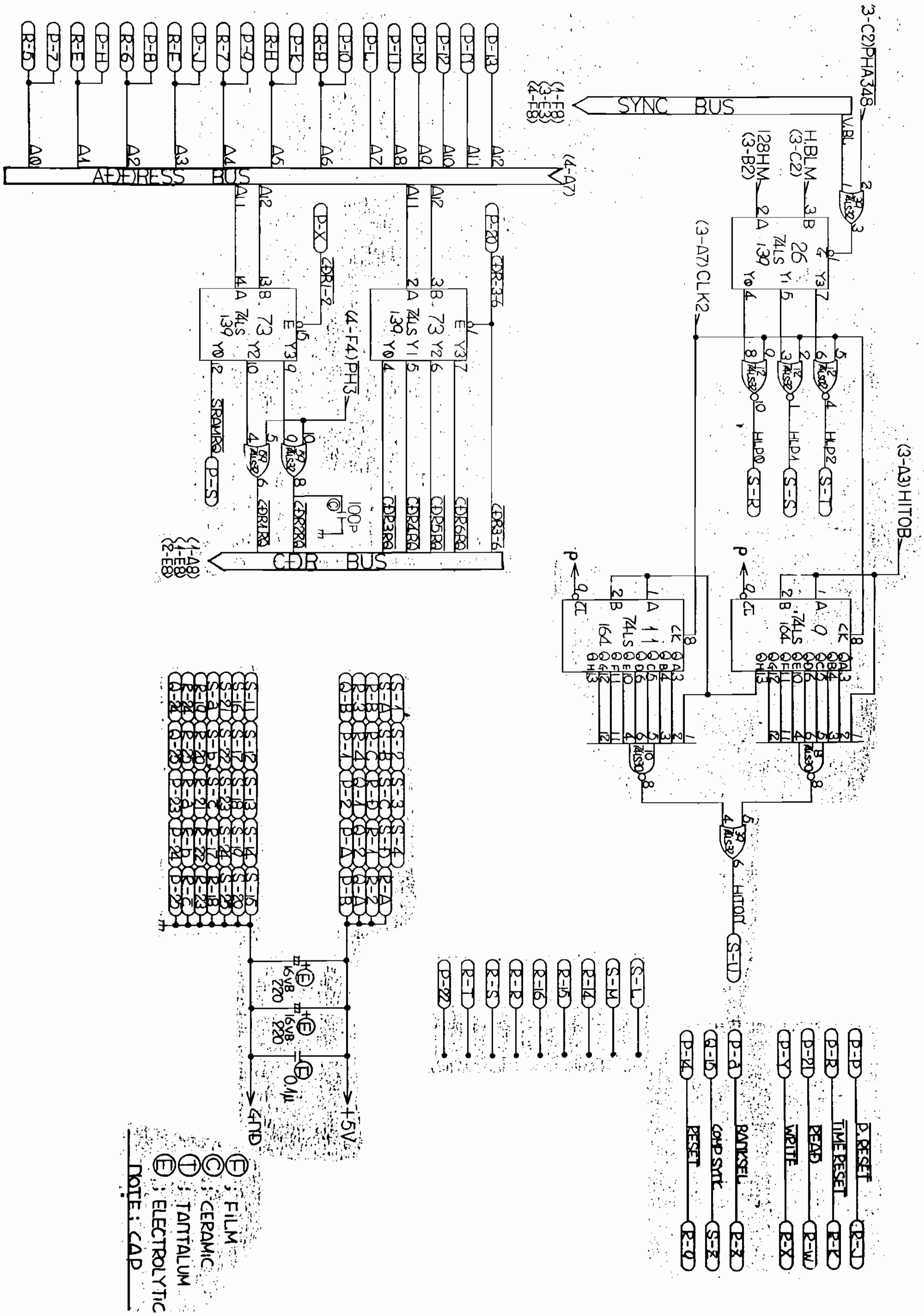
VIDEO PC BOARD SCHEMATIC 4 of 5

FIGURE 30



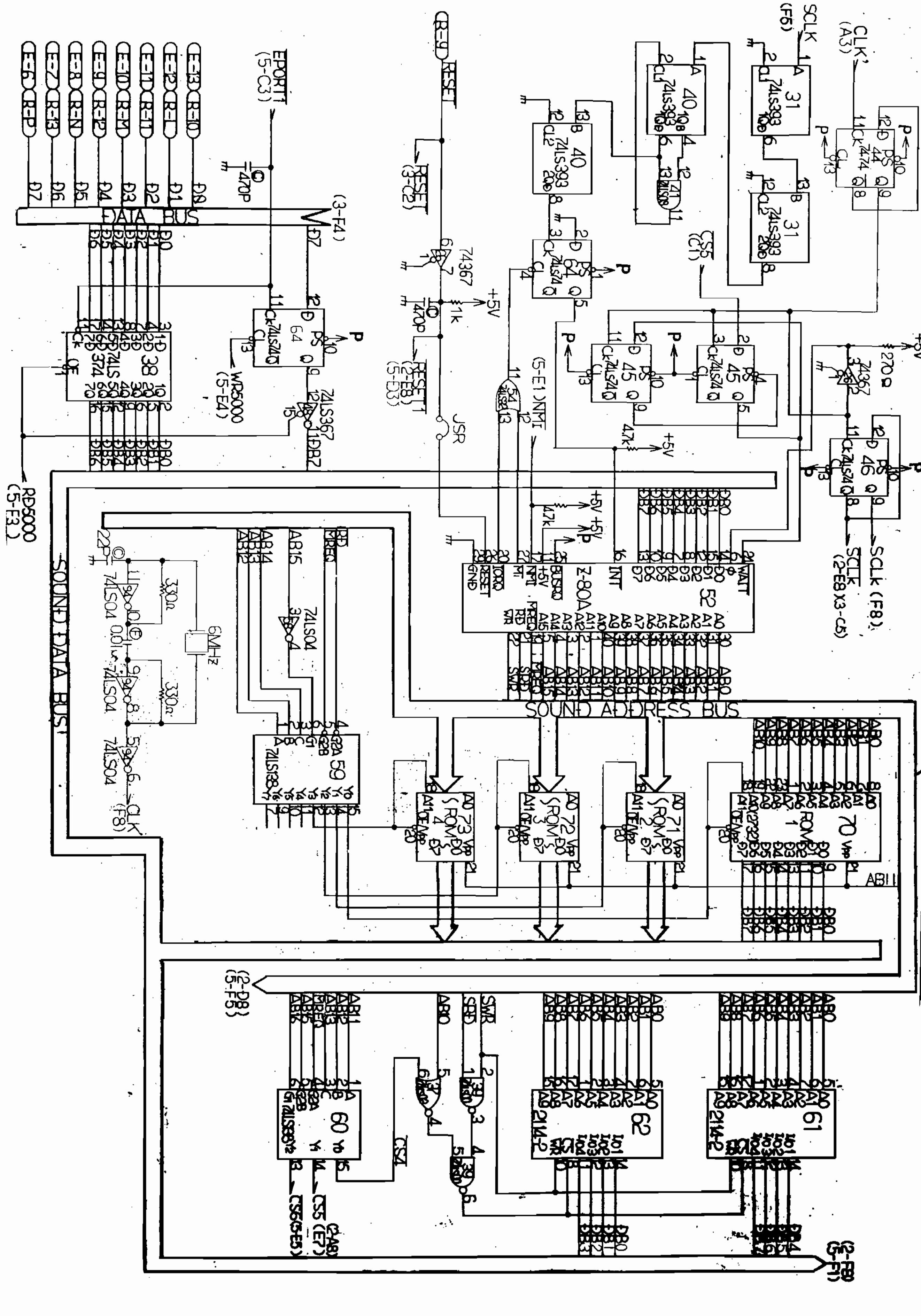
VIDEO PC BOARD SCHEMATIC 5 of 5

FIGURE 31



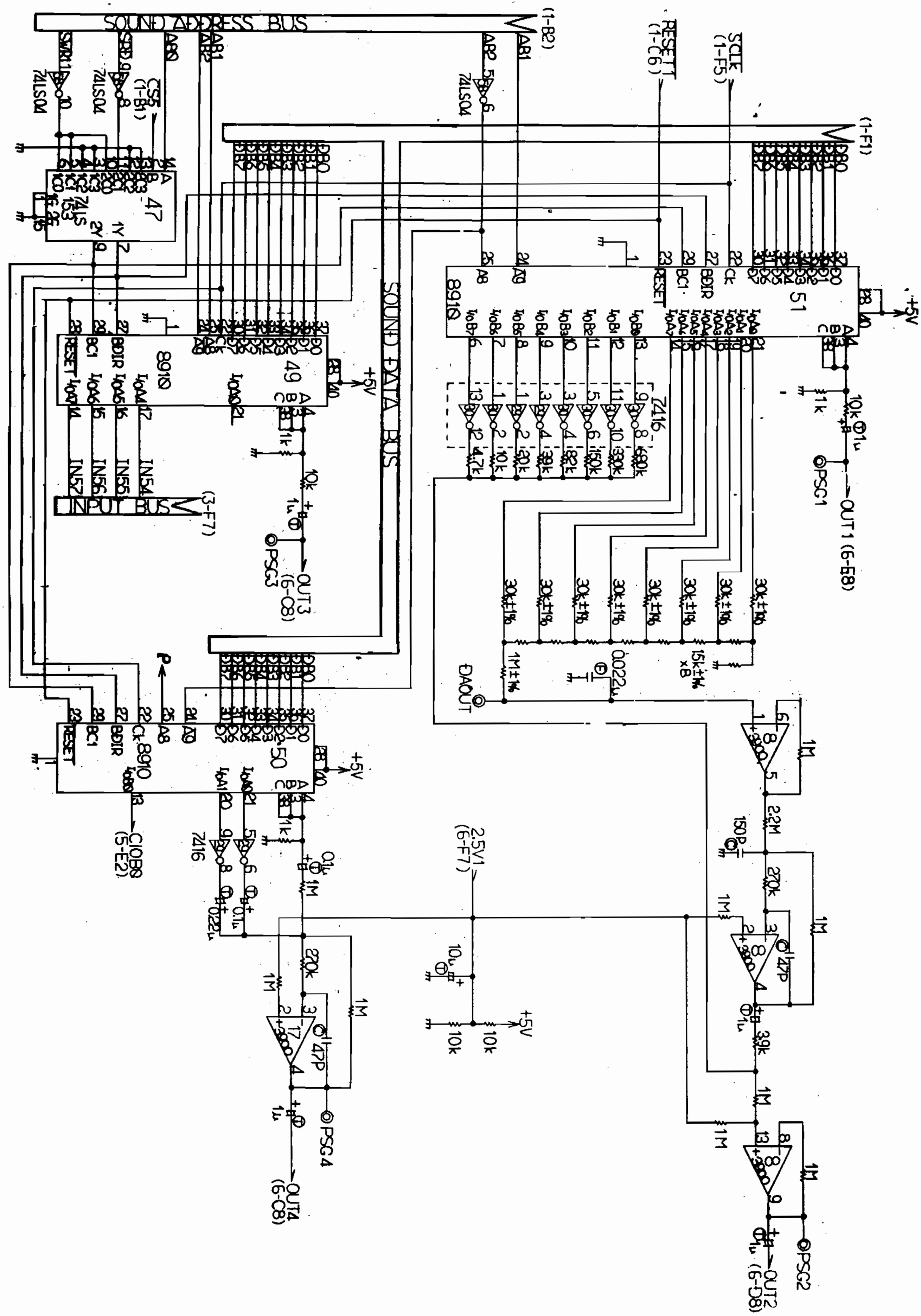
GAME PC BOARD SCHEMATIC 1 of 7

FIGURE 32



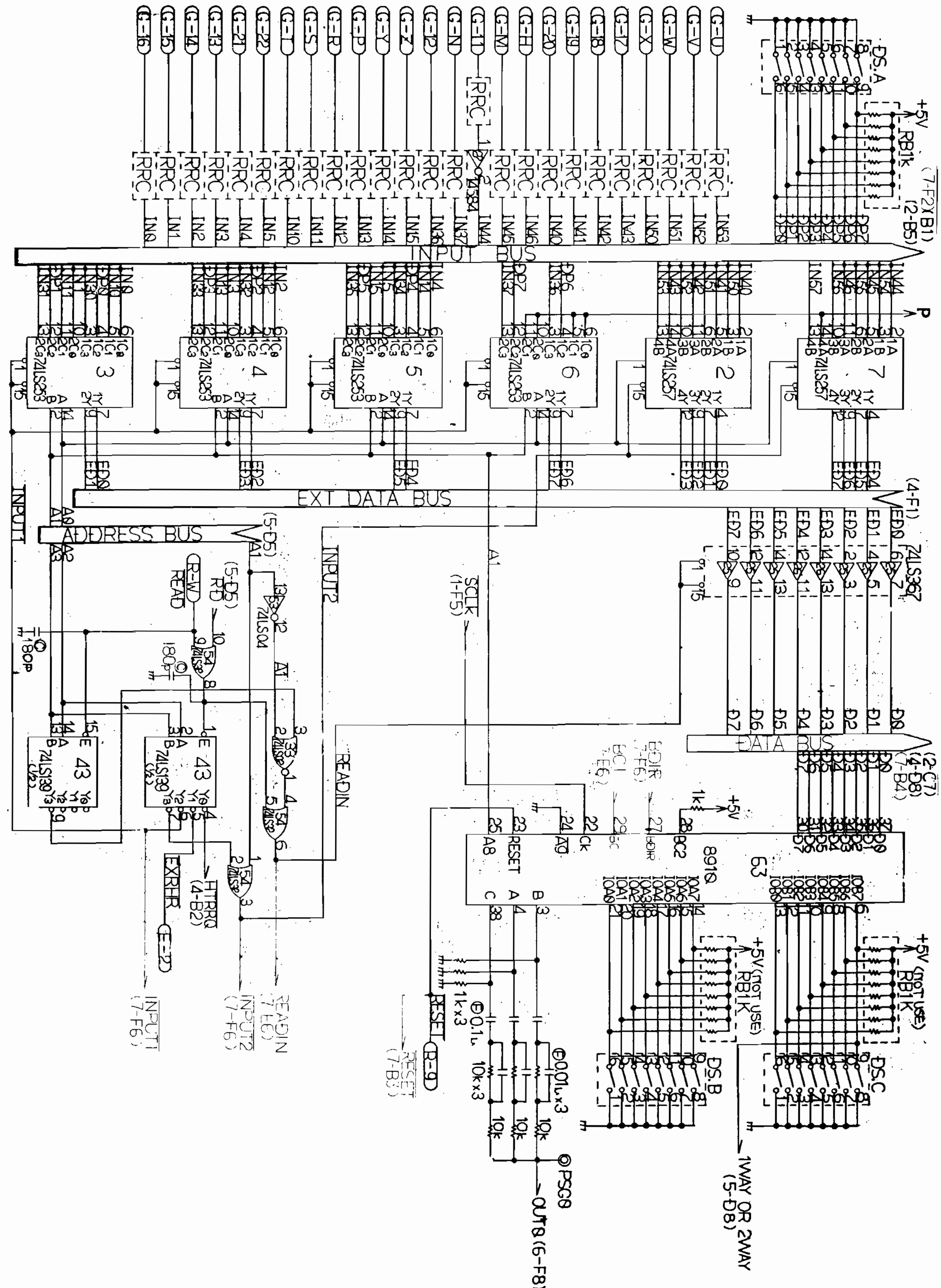
GAME PC BOARD SCHEMATIC 2 of 7

FIGURE 33



GAME PC BOARD SCHEMATIC 3 of 7

FIGURE 34



GAME PC BOARD SCHEMATIC 4 of 7

FIGURE 35

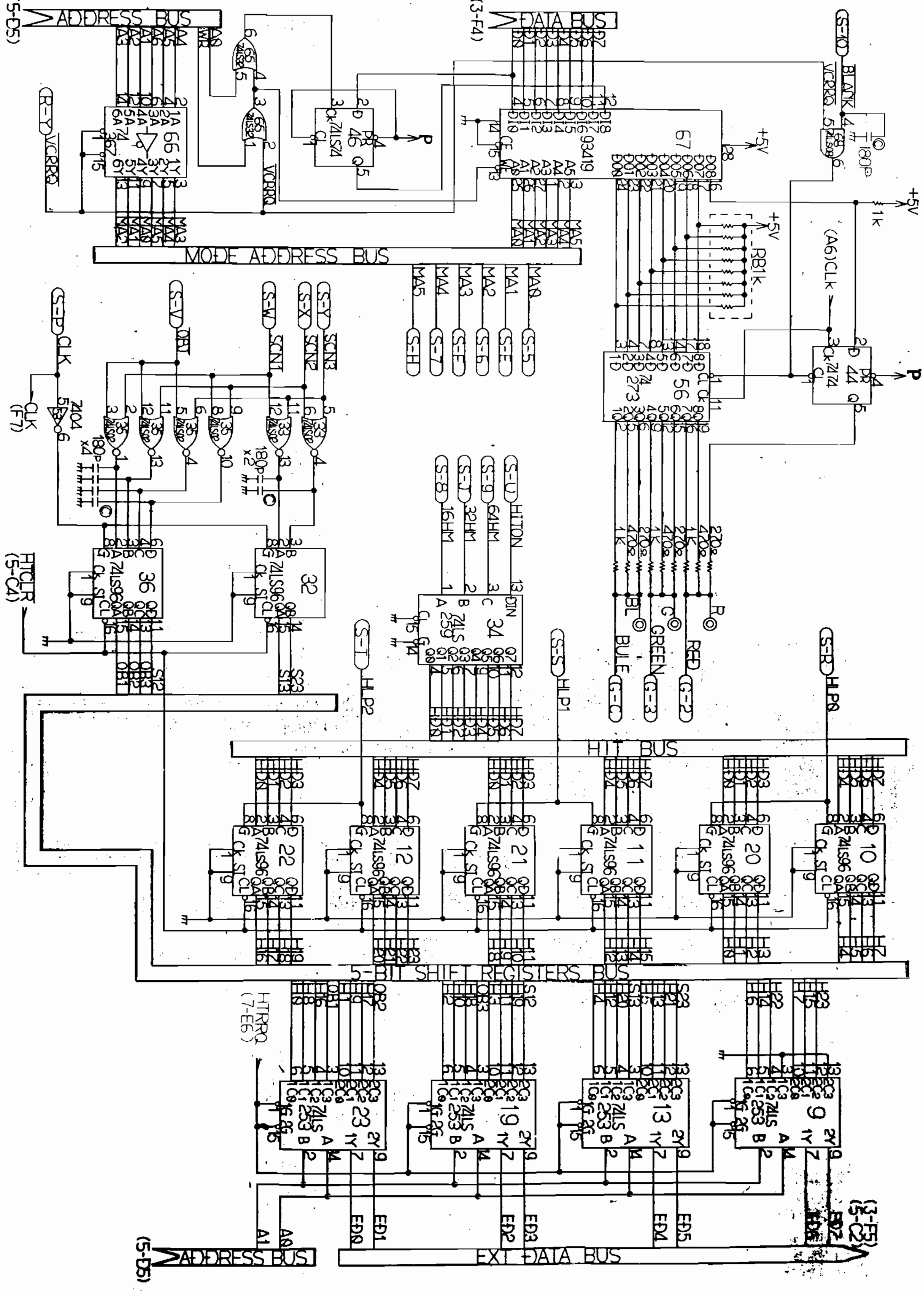


FIGURE 36

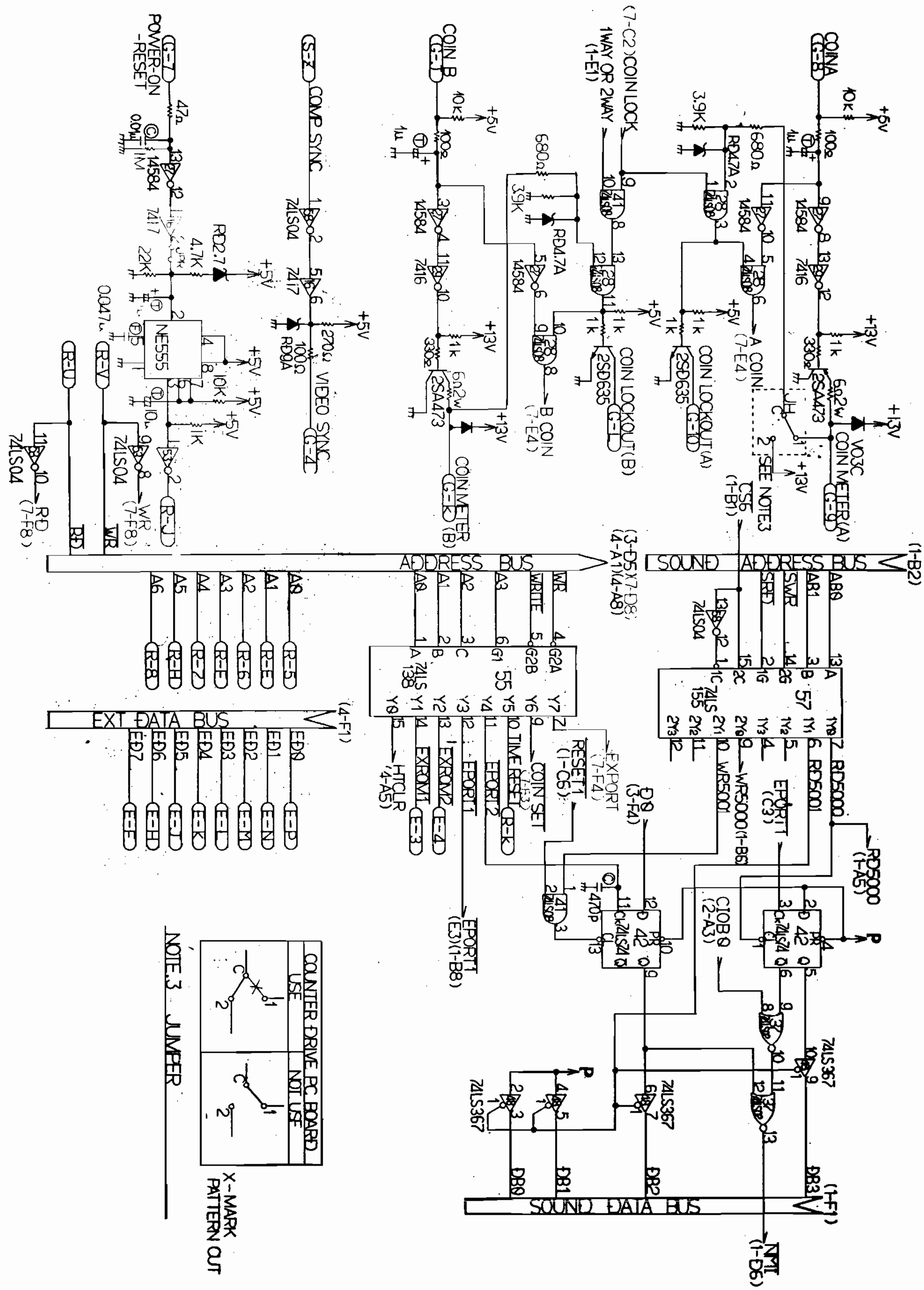
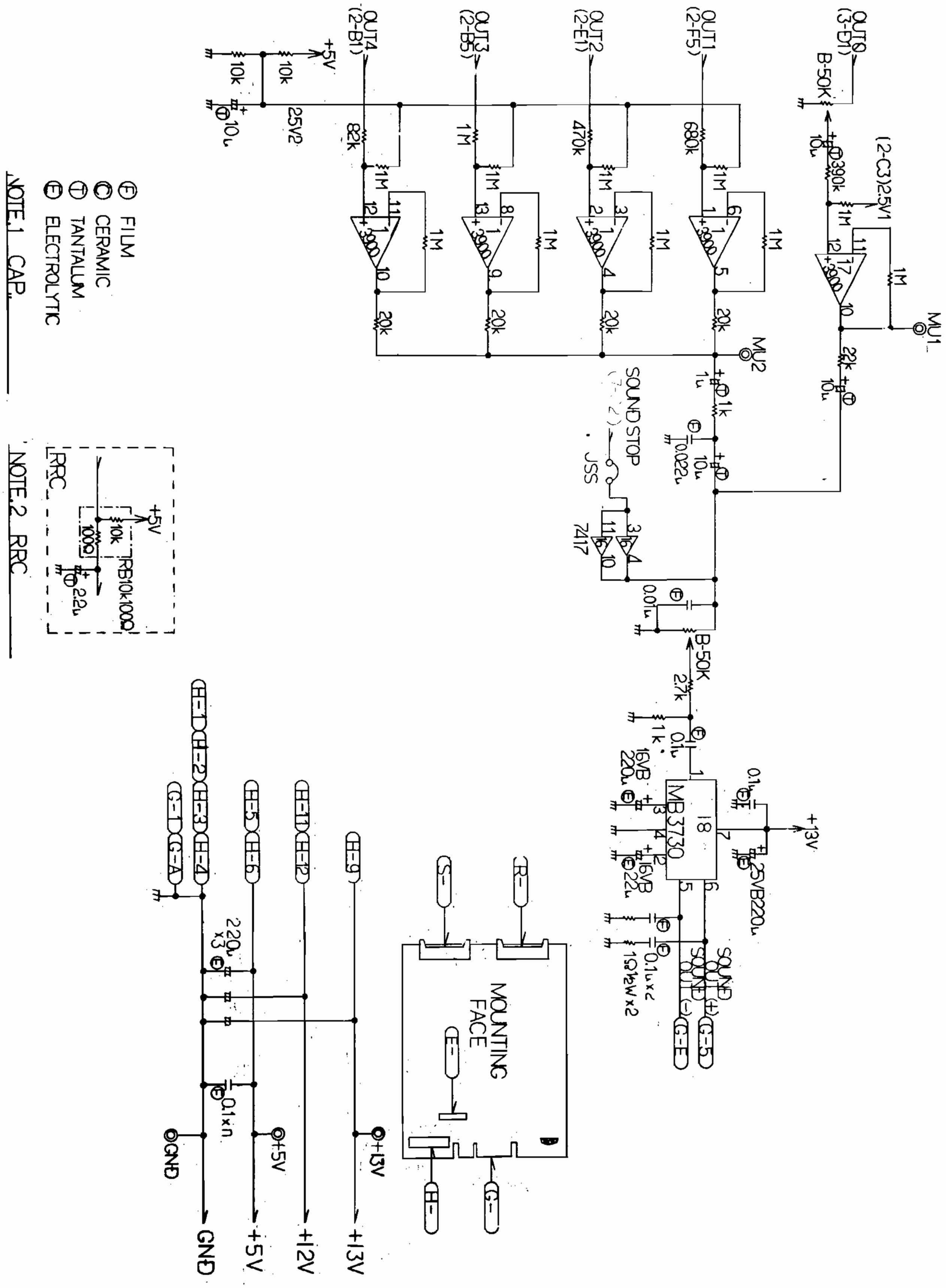
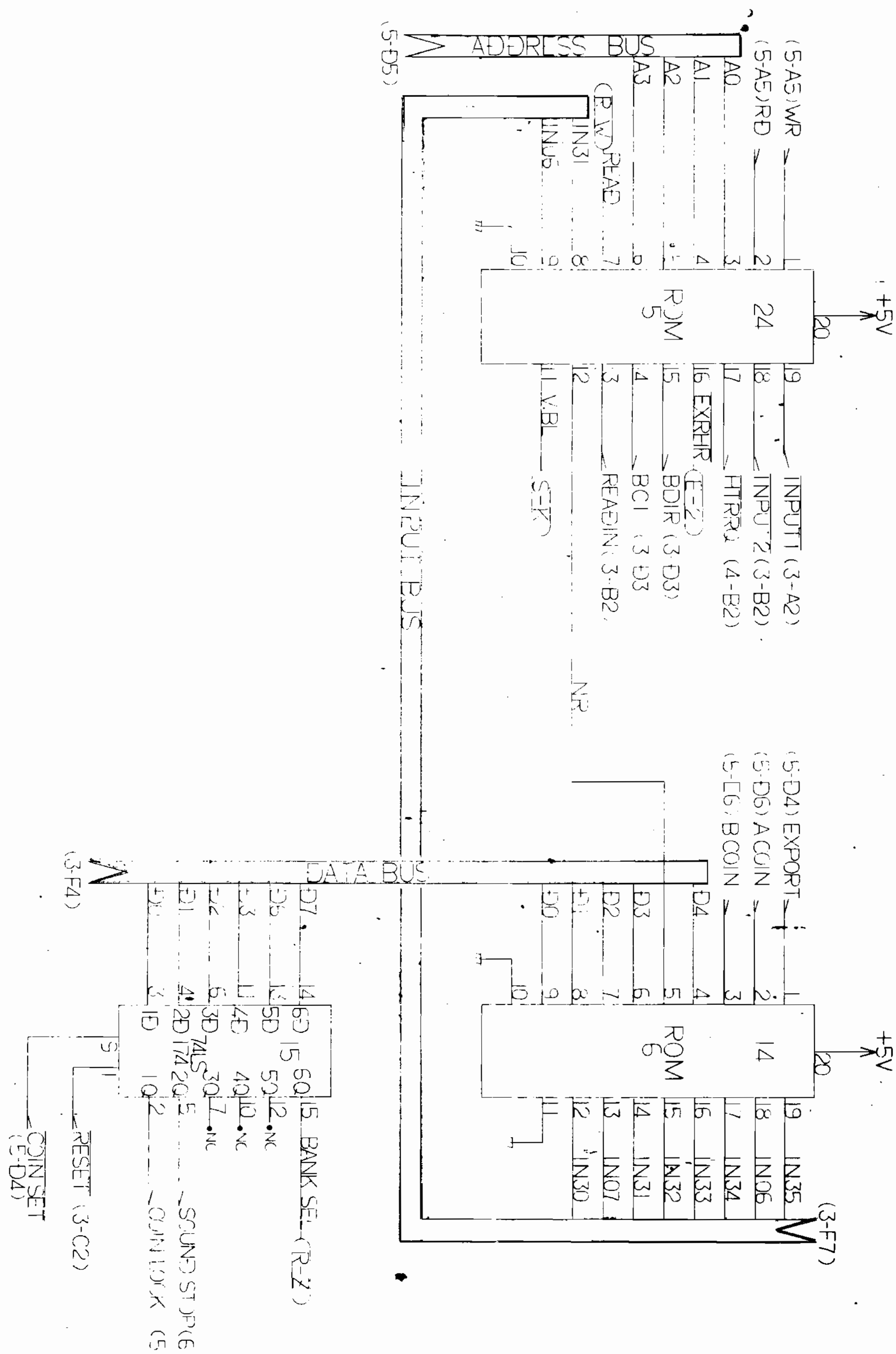

COIN A
COIN B
COMP SYNC
VIDEO SYNC
POWER-ON -RESET
COIN LOCK
1WAY OR 2WAY
COIN LOCKOUT (A)
COIN LOCKOUT (B)
COIN METER (A)
COIN METER (B)
SEE NOTE3
ADDRESS BUS
SOUND ADDRESS BUS
EXT DATA BUS
SOUND DATA BUS
NE555
NOTE.3 JUMPER
COUNTER DRIVE PC BOARD
USE
NOT USE
X-MARK PATTERN CUT

FIGURE 37


MB3730
MOUNTING FACE
SOUND STOP
F FILM
C CERAMIC
T TANTALUM
E ELECTROLYTIC
NOTE.1 CAP.
NOTE.2 RRC
+13V
+12V
+5V
GND

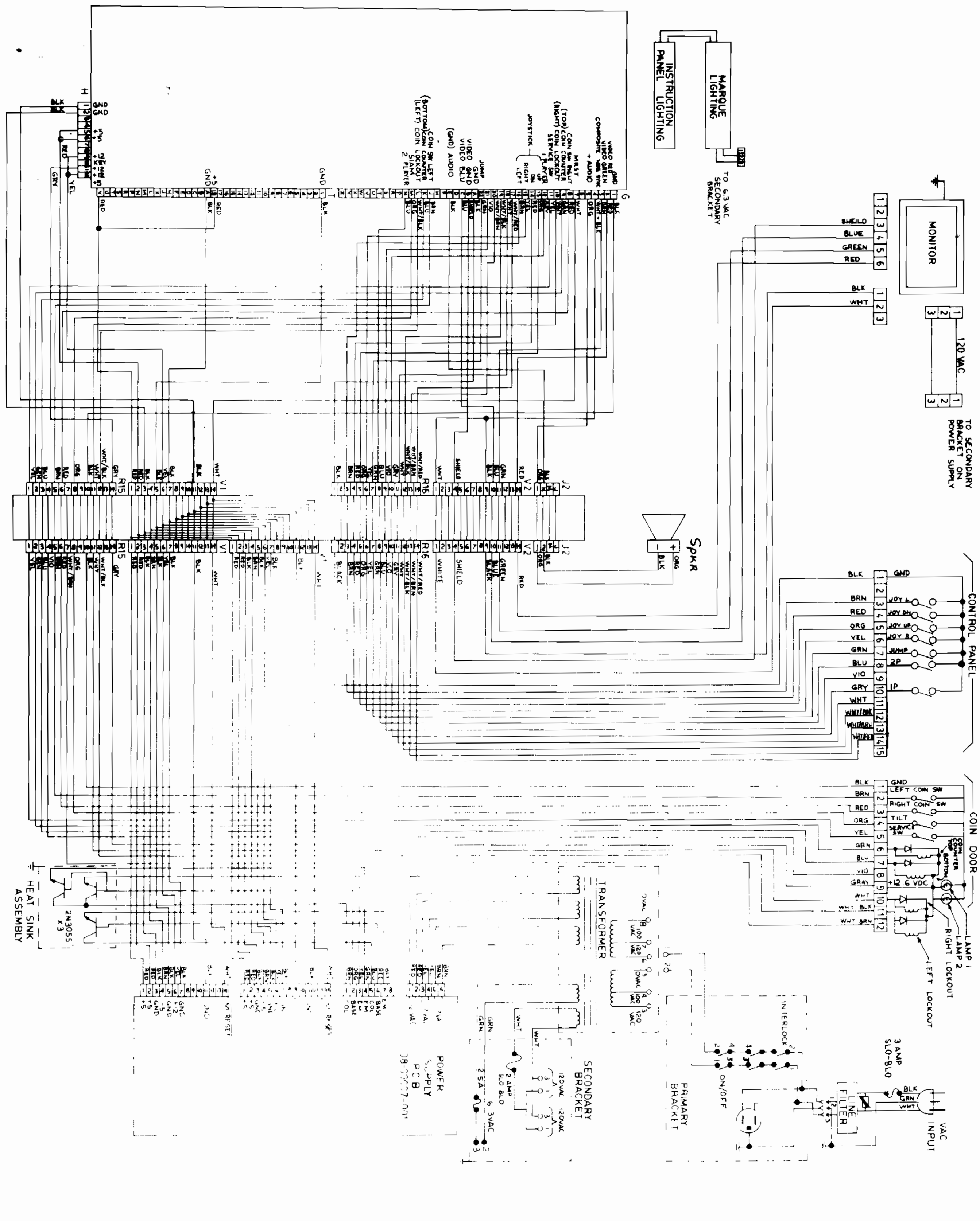
GAME PC BOARD SCHEMATIC 7 of 7

FIGURE 38



WIRING DIAGRAM

FIGURE 39



NOTES

NOTES

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